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HUNT'S

MERCHANTS' MAGAZINE

AND

COMMERCIAL REVIEW.

DECEMBER, 1848.

Art. I.—MOBILE AND OHIO RAILROAD.

While the cities of the North and East are stretching their "iron arms" towards the Mississippi—and New York, Boston, Philadelphia, and Baltimore are struggling in mighty rivalry with each other, which shall *first* grasp, and appropriate the treasures of that vast region—Charleston is silently pushing *her* claim, and completing, step by step, the grand highway, which is to bear to her port the riches of the great South-west. Already she has advanced to the borders of Alabama; and, that nothing may be lost, tributary branches are thrown northward into the fine agricultural districts of Tennessee, eventually to be extended to Nashville and Memphis; while the main trunk, after traversing the heart of Alabama, will pass through the capital of Mississippi, and meet the "Father of Waters" at Vicksburgh.

That this extended system of railway, when completed, will increase the commercial importance of Charleston in an eminent degree, requires no discussion; and it is equally plain that the interests of New Orleans and Mobile—the two commercial cities of the Gulf, and natural points of shipment for the produce of the great valley—will be materially affected by the opening of this new and rapid channel of communication with the seaboard. Even now, the direction of trade is shaping to meet the new condition; and we find, during the present season, that "Alabama cottons" are for the first time regularly chronicled among the arrivals by railway, into Charleston and Savannah. Returning, North Alabama and East Mississippi receive merchandise by the overland route from Charleston, and transport it from the present railroad terminus, many miles, by wagons; often, to points immediately upon the waters emptying into Mobile Bay, which are navigable by steamboats for several months of the year. And this is but the beginning. The laws of the Medes and Persians were not more inflexible than are the laws which govern trade. Individual preferences, or State pride, avail nothing. The merchant who waits for the uncertain winds of heaven to waft his freighted barque to

her destined port, cannot compete in the race with him who employs omnipotent steam to transport his commodities into a harbor where he finds the "iron horse" waiting, ready harnessed, to draw them with lightning speed to his very door.

Alabama, hitherto prolific in *schemes* of internal improvement, has accomplished nothing, save only a few miles of railroad from Montgomery eastward—a link in the great chain before mentioned, which is to drain her of her wealth, to enrich and build up cities in more enterprising and sagacious States. Superior to many, and second to none, of her southern sisters in the natural elements of greatness, Alabama still languishes, and her people groan under the burdens of public debt and prospective taxation, while her resources remain undeveloped, and her principal city and only seaport is fast going to decay!

Such is the present position of this great State; but we have assurance that a brighter day is about to dawn, and that Alabama, stimulated by the example of her eastern neighbors, (and in spite of the short-sighted and illiberal policy of her State rulers,) is shaking off the unaccountable lethargy which has so long overpowered her, blighting like a mildew, and eating into the very sources of her vitality, and will soon enter upon a new and more brilliant era of her history. With a soil of surpassing fertility—with mineral treasures of incalculable value, scattered in varied and lavish profusion throughout her territory, she only requires a vigorous and well-directed system of internal improvements to render them accessible, and place her at once in the front rank of wealthy and powerful States. The first and most important step in this system, may well be characterized the great undertaking to connect the Gulf of Mexico with the Ohio and Upper Mississippi valleys, by means of the Mobile and Ohio Railroad.

The Gulf of Mexico, from causes rapidly developing, is destined, ere long, to become the theatre of a new and extended commerce. The application of steam to ocean navigation, while it has given a wonderful impetus to the commerce of the world, has also awakened a restless spirit of enterprise, that will not much longer brook the delay and hazard of a tedious voyage round Cape Horn to reach the Pacific, when a channel at once safe and accessible can be created, which will cut off half the distance at a blow. The growing importance of our possessions in Oregon, and the large territory acquired by the Mexican war, will make it imperative upon our government to establish, without delay, some more safe and expeditious route of communication with that country; and we have good reasons for believing that the subject is receiving, at this time, the attention at their hands which its high importance demands. That a few years, at farthest, will witness the completion of an unbroken avenue from ocean to ocean, either across the Isthmus of Tehuantepec, or some more favorable point, cannot, we think, admit of reasonable doubt.

The cities of New York and Boston, from their natural location, their capacious and excellent harbors, and healthy climate, occupied positions eminently favorable for becoming, at an early period, the great receiving and distributing reservoirs of the nation. With the advance of emigration westward, it became necessary to construct new facilities for reaching the seaboard; and the great pioneer of American improvement—the Erie Canal—was extended from the Hudson, through the then wilderness of Western New York, to the blue waters of Erie, thus opening to the trade

of New York a territory stretching over two thousand miles inland, with an uninterrupted water communication through its whole extent. As if by magic, the wilderness disappeared, villages and towns sprung up, and the solitudes of yesterday were peopled with an active and industrious population. New York, stimulated by the commerce of the canal, leaped forth like a young giant, and soon left her competitors and rivals hopelessly in the distance. How can we estimate the tremendous influence which the Erie Canal has exerted upon the growth, not of New York alone, but of that vast territory which borders upon the Lakes? The *rapidity* of this growth may be conjectured, however, by comparing the revenues from tolls on this canal and tributaries for the years 1826, 1836, and 1846, being intervals of ten years:—

Receipts for tolls on New York canals in			1826,	in round	numbers.....	$762,000
"	"	"	1836	"	"	1,614,000
"	"	"	1846	"	"	2,764,000

Or an average increase of nearly 8 per cent per annum. It must be remembered, also, that the rates of toll have been much reduced, and the same amount of revenue in 1846 would represent a far greater product than in 1826, and would make the average, therefore, higher than the figures.

The moment that a highway is completed to the Pacific, the superior advantages which these Atlantic cities afford for supplying the great valley with foreign merchandise, will cease forever. We need not enter into argument to prove that the route of which we have spoken must then, of necessity, become the grand thoroughfare for the commerce of the world. It has been done by abler pens than ours. Need we know more than the fact that the ports of the Gulf will be brought, by its consummation, into immediate vicinity with the boundless treasures of the Pacific? that it will be the nearest route from Europe to the East Indies? The cities of the Gulf must then become the "half-way houses" for all foreign traders with the East, and upon the shores of this "Western Mediterranean" must rise the future commercial capital of America, if not of the world! Mobile, as we shall endeavor to show, possesses striking advantages over any other point on the Gulf for becoming the chief emporium of this commerce.

Upon inspecting a map of the Gulf of Mexico, we discover five considerable ports upon its northern coast, within the limits of the United States, to wit:—Galveston, New Orleans, Mobile, Pensacola, and Apalachicola. The depth of water upon the bars, which obstruct the entrance to these harbors, is as follows:—

Galveston.....feet	...	Pensacola.....	22
New Orleans (mouth of Mississippi).	15	Apalachicola.....	16
Mobile (by recent survey).....	20¾		

The last named, from its easterly position, can never become more than a depot for the produce of a limited district; as, whatever may be its advantages otherwise, the system of railways leading to Savannah will effectually cut off all trade from the interior, above a certain point.

Pensacola, with a fine harbor, and, at present, a greater depth of water than any other on the coast, occupies an isolated position. Without means of intercourse with the upper country, she can never become the seat of extensive trade. Efforts have been made to connect with Montgomery

and Savannah by railroad, but without success; and it is not probable that it will be attempted hereafter, should the Mobile and Ohio Railroad be completed.

Galveston is well situated to command a flourishing trade with the interior of Texas, but, like the two ports above named, must always be tributary to the more favored cities of the Gulf.

It remains, then, for us to consider the ports of New Orleans and Mobile, and compare their relative advantages. The growth of New Orleans is the result of the necessities of commerce. Twenty thousand miles of navigable waters converge, and flow by a single outlet to the sea, draining a territory unequalled for fertility upon the surface of the globe. The surplus products of this vast region could reach a market by no other route, and a shipping port was of course inevitable. The most formidable obstacles ever encountered by human energy were overcome, and a city has risen from a pestilential swamp, second only in its commerce to New York. Notwithstanding the rapid increase of New Orleans, and her immense trade, she does not concentrate the wealth or population, to which her position as the seaport of the Mississippi valley entitles her. The reason is obvious. The difficulties in the way of her growth are permanent in their nature. Circumscribed between narrow limits, with the river upon one side, and impassable marshes upon the other, every step in her progress is at immense cost. During the warm season a deadly miasma exhales from these marshes, by which thousands of her population are annually destroyed. Being more than a hundred miles from the ocean, vessels reach her wharves at a heavy expense for towage up the powerful current of the Mississippi. The bars at the mouth of that river do not permit ships of large tonnage to enter her harbor. From all this, it is evident that the trade of New Orleans must be taxed with heavy expenses. Since the northern cities have tapped the Ohio valley, a large trade has been diverted in that direction in all articles of value sufficient to pay the enhanced cost of transportation by land. Thus, while New Orleans exports a large share of the products of the West, New York imports and distributes most of the foreign merchandise to the same region at a fine profit. Every additional line of improvement constructed in the West, reduces the cost of transportation to and from the eastern cities, and consequently increases the tendency of trade in that direction. Nevertheless, were it possible to make New Orleans a healthy city, with a dry soil on which to build, she would soon outstrip New York, and become and continue the first, as she is now the second, commercial city of the American continent.

Let us examine the situation of Mobile. Built upon a dry, sandy plain, at an elevation of fifteen feet above tide-water, this city answers the conditions in that respect which William Penn required of his commissioners, when about to found the city of Philadelphia:—"yt the scituation be high, at least dry and sound, and not swampy, wch is best knowne by digging up two or three earths, and seeing the bottom." The location is healthy, and the summer heat is tempered by refreshing breezes from the Gulf. The country in its vicinity is undulating, and abundantly watered with excellent springs. Pure and wholesome water is brought in pipes from a distance of four or five miles, sufficient to supply the wants of the city. Spring Hill, six miles distant, and various elevated points less remote, offer convenient and charming rural retreats, where the climate is as salubri-

ous as in any section of the Union. Immediately below, Mobile River expands into a beautiful bay, affording secure anchorage for the largest fleets. The labors of the United States Coast Survey, now in progress, have been rewarded by the valuable discovery that the water on the outer bar, at the entrance to Mobile Bay, is gradually deepening, and will now float over vessels drawing twenty-one feet at mean low water. In the language of Lieut. Com. Patterson's report:—

"The survey of the entrance to Mobile Bay proves that remarkable changes have taken place since the survey by Major Kearney, United States Topographical Engineers, in 1822, and that by Major Ogden, United States Corps of Engineers, in 1841." "In 1822 the greatest depth which could be taken over the bar was seventeen feet; in 1841, it was nineteen feet; in 1847, it was twenty and three-quarter feet, each at mean low water." "With the present depth, our heaviest steam frigates can enter and find secure anchorage in Mobile Bay; and, should the depth continue to increase in the same ratio it has for the last six years, it will not be long before our largest frigates may do so also."

While the entrance to this harbor is in a state of transition, that of Pensacola is supposed to have arrived at nearly its stationary point; so that at the present ratio of progression, in a few years, a greater depth may be carried over the bar into Mobile Bay, than into any other harbor of the Gulf. At present, ships of large tonnage are compelled to anchor in the bay, about twenty or twenty-five miles below the city, and employ lighters to receive and discharge their cargoes; as vessels drawing more than eleven feet cannot come to the wharves. Mobile River is divided, a few miles above the city, into several channels, one of which debouches at Mobile, while a larger body of water, (Spanish River, as it is named,) diverges to the east, and empties into the bay on the opposite side of the island which it forms. By erecting a dam or pier at the head of this island, across Spanish River, it is believed that the whole may be made to flow in a single channel past the city and find its outlet into the bay at that point. This would produce a current sufficiently powerful to wash out the channel speedily, and with a moderate expenditure, water enough could be obtained to bring at all times the largest ships to the wharves.

Mobile is more accessible from the Gulf than New Orleans. She is nearer Havana than either New Orleans or Charleston, and is better situated than either of those cities for supplying the great valley with West India products. A central position on the Gulf—an elevated and healthy location—an abundant supply of pure water—the best harbor on the coast; all these elements combine to make Mobile the most favorable point that could be selected for the terminus of a great trunk, like the projected railway to the Ohio.

To a private citizen of Mobile, M. J. D. Baldwyn, Esq., belongs the honor of originating this magnificent project. The continuous and rapid diminution of the trade of Mobile with the interior for several successive years, the marked change in the character of that trade, and the inevitable transformation, not far distant, of one of the most active commercial cities of the South, into a mere depot for the storage and transhipment of cotton bales, had forced upon the consideration of reflecting men an inquiry into the causes of this depression, and by a natural sequence led them in quest of a remedy for the evil. The active mind of Mr. Baldwyn was the first to comprehend the immense importance of a railway connection be-

tween the Ohio and Mississippi valleys and the Gulf of Mexico, and the favorable position of Mobile for its southern terminus. Undismayed by the magnitude of the project, he sought to enlist the public feeling in its behalf, and soon succeeded in awakening a deep interest among his fellow citizens. This resulted in a call for a public meeting, which was held accordingly in the city of Mobile on the evening of January 11th, 1847, and was numerously attended. From that period may be dated the birth of this gigantic enterprise.

Tennessee was the first State to bestow a charter upon the Mobile and Ohio Railroad Company; and with a just appreciation of the true interests of her people, she sought to encourage the prosecution of the work by the most liberal provisions, and accompanied the instrument with a noble testimonial of favor, in the shape of a State subscription of over $600,000. The legislature of Alabama soon after passed an act incorporating the company, with a capital of $10,000,000; which was followed by Mississippi and Kentucky, with grants of the right of way through those States, and an extension of all the chartered privileges appertaining to the company under their act of incorporation in Alabama. In May last, books were opened in Mobile for subscription to the capital stock, and in twenty days the sum of $650,000 was subscribed in that city. The company was then organized by the election of president and directors, who are actively engaged in the prosecution of the necessary steps preliminary to the commencement of the work. Having thus briefly alluded to the inception of this great enterprise, and its progress to the present time, we proceed to examine its merits as an investment for capital.

A careful examination of the country has been made by Lewis Troost, Esq., engineer, whose reconnaissance has resulted in the discovery of the entire feasibility of the project, and in the recommendation of the following, as the most favorable route:—Commencing at Mobile, the route proposed extends up the valley of the Chickasawbogue, until it strikes the dividing ridge between the Tombigbee and Escatawba rivers—follows this ridge to the head of the Escatawba—from thence, continuing its general northerly direction, and passing near the towns of Marion, Macon, and Aberdeen, Mississippi, to the Tennessee River, in the State of Tennessee, below the Big Bend Shoals, a distance of about 340 miles from Mobile. From thence, through the towns of Jackson and Trenton in Tennessee, and Moscow in Kentucky, to its terminus on the Mississippi River, at the town of Columbus, Kentucky, 16 miles below the mouth of the Ohio River, and 470 miles from Mobile.

This will be the longest railroad in the United States under a single charter. Great as is its length, however, the general surface of the country is so singularly adapted to its favorable construction, that the route need vary little from an air line connecting the termini. The absence of large streams, (the longest bridge required being over Obion River, in the State of Tennessee, about 180 feet span,) the freedom from all obstacles in the way of heavy rock excavations, as shown by the reconnaissance of Mr. Troost—the abundance of suitable timber—the light grade, which is either level, or descending towards the Gulf, in the direction of heavy freights—these are characteristics which are seldom found united, but which exist here. From these facts, it may well be doubted whether a railroad of considerable length could be built between any other two points in the United

States at as small a cost per mile, or one capable of transporting freight and passengers at as cheap a rate with profit to the stockholders.

By comparing Mr. Troost's report of the topographical character of the country upon the route of the Mobile and Ohio Railroad, with the cost of other works already completed in the South, in sections presenting similar general features, we are enabled, in the absence of an accurate instrumental survey,* to make a reasonable approximation to the amount required to construct and equip this road, ready for business. The following estimates, made upon this basis, it is believed will be found to exceed, rather than fall short of, the actual cost of this work :—

Cost of grading (including bridges and culverts) ready for superstructure, 470 miles, at an average of $3,500 per mile	$1,645,000
Cost of superstructure, counting the rail at 56 pounds to the yard, and the iron at $65 per ton of 2,240 pounds, including depots, water stations, side tracks, &c., &c., at $9,780 per mile	4,596,600
Cost of locomotives, freight, baggage and passenger cars, &c., &c., to place the road in efficient working condition, say	608,400
Total cost of road and equipments	$6,850,000

Being a little over $14,500 per mile. This railroad, when completed, must depend upon the following sources of revenue :—

1st. The travel and freight supplied by the country along the line.

2d. The through travel, and such portion of the freight passing between the mouth of the Ohio River and the Gulf of Mexico, as can be diverted to the railroad from the Mississippi River.

3d. The transportation of the mails.

First. The local trade and travel. The following table, prepared with care, and based upon the estimates derived from Patent Office Reports, and other reliable sources, exhibits the population and resources of the country through which the Mobile and Ohio Railroad will pass, and the adjacent sections, which will be dependent upon and furnish traffic to that road :

POPULATION AND PRODUCTS OF COUNTRY ON THE ROUTE OF MOBILE AND OHIO RAILROAD IN 1847.

Twelve counties in Alabama, namely, Mobile, Washington, Choctaw, Sumpter, Pickens, Fayette, Franklin, Lauderdale, Lawrence, Limestone, Madison, Morgan :—

Population	241,500	Pounds of wool	190,000
Bushels of wheat	450,000	" tobacco	177,000
" corn	10,400,000	Number of horses and mules.	55,500
" oats	686,600	" neat cattle	222,200
" rye	26,250	" sheep	108,150
" potatoes	394,000	" swine	598,000
Tons of hay	3,000	Poultry, value	$173,100
Pounds of cotton	71,000,000		

Nineteen counties in Mississippi, namely, Attala, Chickasaw, Choctaw, Clark, Itawamba, Kemper, Lafayette, Lauderdale, Lowndes, Monroe, Neshoba, Newton, Noxubee, Oktibbeha, Pontotoc, Tippah, Tishamingo, Winston, Yallabusha :—

Population	227,500	Pounds of wool	130,200
Bushels of wheat	372,300	" tobacco	130,000
" corn	5,604,500	Number of horses and mules.	57,500
" oats	459,300	" neat cattle	275,000
" rye	7,650	" sheep	65,100
" potatoes	341,600	" swine	528,300
Tons of hay	350	Poultry, value	$212,700
Pounds of cotton	67,500,000		

* Such a survey will be commenced early in November, under the direction of John Childe, Esq., as Chief Engineer.

Twenty counties in Tennessee, namely, Benton, Carroll, Dyer, Fayette, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Hickman, Humphreys, Lawrence, McNairy, Madison, Obion, Perry, Stewart, Wayne, Weakley:—

Population	258,100	Pounds of wool	502,100
Bushels of wheat	2,625,000	" tobacco	15,874,200
" corn	14,804,350	Number of horses and mules	96,500
" oats	1,884,400	" neat cattle	295,400
" rye	54,600	" sheep	251,500
" potatoes	648,000	" swine	1,047,600
Tons of hay	8,100	Poultry, value	$239,200
Pounds of cotton	18,270,000		

Six counties in Kentucky, namely, Ballard, Calloway, Graves, Hickman, McCracken, Marshall:—

Population	34,200	Pounds of wool	92,300
Bushels of wheat	228,000	" tobacco	2,550,000
" corn	2,180,000	Number of horses and mules	14,850
" oats	634,500	" neat cattle	33,150
" rye	13,250	" sheep	46,150
" potatoes	90,500	" swine	105,500
Tons of hay	1,950	Poultry, value	$27,500
Pounds of cotton	550,000		

RECAPITULATION.

Population	761,300	Pounds of wool	914,600
Bushels of wheat	3,675,300	" tobacco	18,671,200
" corn	32,988,850	Number of horses and mules	224,350
" oats	3,664,800	" neat cattle	825,750
" rye	101,750	" sheep	470,900
" potatoes	1,474,100	" swine	2,279,400
Tons of hay	13,400	Poultry, value	$652,500
Pounds of cotton	157,320,000		

These fifty-seven counties embrace an area of more than 35,000 square miles, and comprise within their limits some of the most fertile lands of the South. Much of the country is remote from market, and consequently, is comparatively new and unsettled. The stimulus given to the growth of these districts by the construction of a railroad through them, would fill them up rapidly with an active population, which would furnish a constantly increasing traffic to the road. If we may be allowed to judge of the local support that would be rendered to the Mobile and Ohio Railroad, from a comparison with the population and resources of districts traversed by other railroads, and the business they create, we must conclude that this source of revenue alone would yield a moderate income to the stockholders.

Second. The through travel, and freight transportation. No accurate record is kept of the number of passengers annually arriving by steamboats into New Orleans from points above the mouth of the Ohio River; we are, therefore, left somewhat to conjecture. From the best data we are able to procure, however, we believe the aggregate of arrivals and departures will be found to exceed 40,000 per annum. The completion of the Mobile and Ohio Railroad will afford the traveller destined for the Gulf a choice between the two following routes:—

	Distance.	Time.	Fare.
From Cairo to New Orleans by steamer	1,012 miles.	84 to 96 hours.	$15 00
" Mobile by railroad	470 "	24 "	10 00
Difference in favor of Mobile.	542 miles.	60 to 72 hours.	$5 00

Or, if destined for New Orleans—

	Distance.	Time.	Fare.
By railroad from Cairo to Mobile.....	470 miles.	24 hours.	$10 00
By steamer from Mobile to New Orleans.....	175 "	16 "	5 00
Total.....	645	40	$15 00

Leaving a difference in favor of the route via Mobile of 367 miles in distance, and 44 to 56 hours in time, at the same rates of fare.

The Mobile and Ohio Railroad must, therefore, when finished, inevitably attract and monopolize the whole of this immense travel. Not only this, but thousands who are deterred from visiting the Gulf by the perils of Mississippi navigation, would avail themselves of the existence of railroad facilities, to enjoy the delightful winter climate of the tropics. The tide of travel between New York and the West Indies and Mexico, would tend more and more to the route of this road, as the different lines of railway now progressing north and east of Cincinnati should be completed. From these circumstances, we hazard little in the assertion, that the number of passengers to be conveyed over the whole length of the Mobile and Ohio Railroad, would reach nearly 50,000 per annum.

Could this road compete profitably with the Mississippi River in the transportation of heavy freight? We answer in the affirmative. Fortunately, the experience of the last fourteen years in railroad building in the United States affords ample material for our guidance, in entering upon new undertakings. We are no longer compelled to advance new theories, for the results of all previous experiments are before us. From these we can institute correct comparisons, and illustrate the advantages of particular routes. There are several railroad lines in the United States that come in direct competition with river routes, and some of these are sufficiently analagous to enable us to form a safe judgment, from their success, of the prospects of the Mobile and Ohio Railroad.

The Western Railroad, from Boston to Albany, furnishes a most striking example of the success of railroad competition against formidable odds. This road was opened in the fall of 1841, at a cost of over $8,500,000, and is 156 miles in length. It gave to produce reaching Albany from the West, the choice of two markets—New York, 160 miles distant, without changing freight, by the "safest river navigation in the world;" or Boston, nearly the same distance by railroad, with the additional cost of removing the produce from canal boats to the cars. What has been the consequence? Witness the rapid and steady increase of the revenues upon this road since its completion, a large portion of which is from freights:—

Years.	Receipts.	Expenses.	Nett Income.	Dividends.
1842.....	$512,688	$266,620	$246,068	.....
1843.....	573,883	283,826	290,057	.....
1844	753,753	314,074	439,679	3 per cent
1845.....	813,480	370,621	442,859	5 "
1846 (11 months).....	878,417	412,679	465,738	6 "
1847.....	1,325,336	676,689	648,647	8 "
1848.....	.....	.....	725,000 prob'ly	.....

Witness also the effect of this road upon the growth of Boston, as compared with New York:—

Population of New York in		1830.....	203,007				
"	"	1840.....	312,710	Increase in 10 years	54	per cent.	
"	"	1845.....	371,102	" 5 "	18½		
"	Boston	1830.....	61,392				
"	"	1840.....	85,000	" 10 "	37		
"	"	1845.....	114,366	" 5 "	35		

From this, we see that while the ratio of increase has declined in New York, since the completion of the Western Railroad, from 54 to 37 per cent for ten years, the ratio for Boston has increased from 37 to 70 per cent for the same period. The value of real and personal estate has increased in the latter city in like proportion :—

Value of real estate in Boston	1830	$36,963,000	Personal	$24,104,200	Total	$61,067,200	
"	"	1840	58,577,800	"	32,248,600	"	91,826,400
"	"	1845	81,991,400	"	53,957,300	"	135,948,700

This shows an advance in the ratio of 100 per cent, since 1840. It cannot be denied that this wonderful prosperity is chiefly owing to her railroad communication with the West. Notwithstanding the heavy cost of this work—equal to the sum required to construct the Mobile and Ohio Railroad, which is three times its length—it has yielded a fine profit from the beginning, and, as shown by the table, the stock is becoming more and more valuable every year.

The Georgia and South Carolina railroads afford further illustration, nearer home, of the value of similar enterprises, whether we regard them as objects for the investment of capital, or in their higher bearings, as powerful agents in stimulating the growth and developing the natural resources of the regions through which they pass. At Augusta, as at Albany, we find a navigable river and a railroad competing for the transportation of the produce arriving there, and with like results. Although every bale of cotton shipped from Augusta by railroad to the seaboard pays a freight of one dollar, and a heavy drayage tax, which is avoided by the boats, while the freight by the latter is only fifty cents per bale, we find that the South Carolina Railroad has proved the more successful competitor, and receives the largest share. Of the total amount of 134,302 bales of cotton received in Charleston by the railroad in 1847, 73,149 bales were from Hamburg and Augusta. About two-thirds of the receipts at the two places last named, now go forward by railroad to that city, and the tendency in that direction is annually increasing. Notwithstanding the quantity of cotton reaching Charleston by this road in 1847, was (owing to the short crop in Georgia and Carolina) 62,833 bales less than in 1846, the receipts of the company were $66,494 05 greater than for that year, and the nett revenue increased $72,722 78. Much of this gain was in up freights, destined for North and East Alabama; and, as we have before remarked, some portion of it for places immediately upon the rivers emptying into Mobile Bay. Need we stronger proof of the fact that freight *will abandon* the water for land conveyance, whenever railroad facilities are offered? That northern capitalists are satisfied of this, is manifest from their readiness to invest a large amount in building a railroad parallel to the Hudson River, thus acknowledging the superiority of railroads over the most favorable circumstances of river navigation.

The length of the Mobile and Ohio Railroad will be about 470 miles. The distance from the mouth of the Ohio River to New Orleans by water is 1,012 miles. From a report of Thomas Allen, Esq., to the Chicago

Convention of July, 1847, we obtain the actual cost of the trips of three steamers plying between St. Louis and New Orleans :—

Steamer I——,	of 249 tons,	run at an expense of		$143 50	per day.	
" M——,	886	"	"	"	355 00	"
" W——,	498	"	"	"	325 00	"
Total.	1,633				$823 50	

Estimating these three steamers with an aggregate tonnage of 1,633 tons, to convey, on an average, an aggregate of 1,800 tons cargo to New Orleans, at the cost of $823 50 per day, we should have for a trip of 4½ days, (the usual time required between Cairo and New Orleans,) a total of $3,705 75. Adding to this, for one day in port, loading and unloading, at, say half the running expenses, $411 75, would make the whole cost $4,117 50 for the trip. At a cost of $60 per ton, for building 1,633 tons, we have $97,980 as their value, which is below the average. This would give $16,330 per annum as the depreciation in value, supposing the steamers to last six years. Including these items, we should have as the cost of transporting 1,800 tons of freight to New Orleans by water—

Running expenses of the trip	$4,117 50
Wear and tear of hulls, &c., &c.	408 00
Insurance on do., one-half value	50 00
Total	$4,575 50

Being, without fractions, $2 54 per ton. This approximation would require a considerable addition in practice, for the delays and accidents, loss of trips, &c., &c., to which steamers are liable on the Mississippi, and which it is impossible to estimate with any accuracy. Supposing, however, these causes to increase the cost one-fourth, the total would be $3 17 per ton.

The cost of transporting freight over the following railroads was, in 1847—

Georgia Railroad	1,670	per ton	per mile, and the average load drawn per engine,			38½ tons.
Baltimore & Ohio	1,652	"	"	"	"	41¾ "
Western	1,334	"	"	"	"	....

Which includes "maintenance of way," and all other expenses incident to these roads. On the two former, owing to imperfect construction, and the use of the flat rail on the earlier portions of the route, the annual cost of repairs is unusually large. If we deduct this excess, and, on the Baltimore and Ohio Railroad, the expensive charge for horse power with which it is burdened, we shall have for that road a cost per ton per mile of 0.947, in trains of 41¾ tons per engine. On that, as well as on the Western Railroad, grades of over eighty feet to the mile are used, while we are assured by Mr. Troost, that the grade of the Mobile and Ohio road need nowhere exceed forty feet to the mile. Assuming that an engine of the second class would draw a load of fifty tons nett freight, over a grade of eighty feet to the mile, without difficulty, one of the same power would move ninety tons over a grade of forty feet with ease ; and an engine of the first class would pull one hundred and thirty-five tons over the same grade, with like facility.

Let us suppose for a moment that the Mobile and Ohio Railroad is completed. Applying the advantages which it will possess over the roads before mentioned, in its straight line and easy grades ; and assuming ninety

tons as the average freight drawn per engine, we have as the cost of transporting one ton from the mouth of the Ohio River to Mobile, at .442 per mile, omitting decimals, $2 08 per ton. Or, if the ratio per mile be one-half greater than the above, owing to increase of tonnage, we should have .663, or $3 12 per ton. This estimate, which is about half the actual cost of freight transportation on the Western Railroad, will not, we are convinced, be found too low.

It is contended by many, that, as freight destined for the Gulf must be brought from the Upper Mississippi and Ohio by steamboats to the northern terminus, when once aboard it would remain there, and float on to New Orleans, in preference to stopping half way, to be transported by railroad cars. That the railroad would intercept all such freights, we do not, of course, assert. That it would divert a large portion, enough to make it one of the most profitable roads in the Union, we firmly believe. But what is the case at present?

The number of steamboat arrivals into the port of St. Louis for 1846, was, as we gather from published statistics—

From Illinois River	446
" Upper Mississippi	663
" Missouri	256
	1,365

These steamers were of light draft, and terminated their voyages at St. Louis. At this point they deposited their cargoes, and received return freights.

The arrivals from New Orleans for the same year, were 395 steamers of larger tonnage, that likewise loaded and discharged their cargoes at St. Louis. The down cargoes of these 395 steamers were mostly made up of produce, &c., brought into St. Louis from above by the smaller craft before mentioned. Thus, we see that the largest share of Upper Mississippi freight passing Columbus, Kentucky, to and from New Orleans, is transhipped once at St. Louis. This city being only 170 miles above, it will be easy, when the railroad is completed, to transfer the shipping point, and extend the trips of these light draft steamers to Columbus. So with regard to the Ohio. Navigation is frequently interrupted above the mouth for the larger class of boats, and much freight passing that river is transferred from one boat to another, before reaching its destination. The construction of this road would result in the formation of steamboat lines, connecting with all important points above on the two rivers; and these, ere long, would in turn give place to tributary railways, uniting St. Louis, Cincinnati, and other chief cities of the West, to the Gulf by an unbroken chain.

The Georgia Railroad transports grain 171 miles for 8 cents per bushel, and merchandise at an average of 25 cents per 100 pounds; which yields a profit of 9 per cent on the investment, besides paying interest on a considerable debt.

The usual freight charges between St. Louis and New Orleans, by water, are about 12½ cents per bushel, on corn and grain; for flour, pork, &c., 40 a 50 cents per barrel; and from 20 a 25 cents per 100 pounds on merchandise shipped by weight.

The total exports of eight leading articles of western products, from New Orleans, for the year ending August 31, 1847, were as follows:—

Flour. *Barrels.*	Pork. *Barrels.*	Bacon. *Hhds.*	Lard. *Kegs.*	Beef. *Barrels.*	Lead. *Pigs.*	Whiskey. *Barrels.*	Corn. *Sacks.*
1,319,500	230,520	25,904	907,977	51,996	624,958	63,259	2,520,813

Allowing that only one-fourth of the above products would be transferred from the river to the railroad, we should have from this source—

Flour. *Barrels.*	Pork. *Barrels.*	Bacon. *Hhds.*	Lard. *Kegs.*	Beef. *Barrels.*	Lead. *Pigs.*	Whiskey. *Barrels.*	Corn. *Sacks.*
329,875	57,630	6,476	226,994	12,999	156,964	15,815	630,203

Third. The transportation of the mails. This item at $200 per mile, which is about the rate paid for day service, would yield to the road a revenue of $94,000 per annum.

To give, in tabular form, a view of the probable business and profits of the Mobile and Ohio Railroad, deduced from the foregoing data, and adopting the lowest scale of charges for through freight:—

PROBABLE BUSINESS OF MOBILE AND OHIO RAILROAD FOR ONE YEAR.—LOCAL TRADE.

100 passengers per day, each way, average half distance, 73,000	a $6.....		$438,000
300,000 bushels wheat	" "	a 10 cents.	30,000
500,000 " corn	" "	a 10 cents.	50,000
350,000 bales cotton	" "	a $1 50.	525,000
20,000 tons freight, both ways	" "	3 00.	60,000
			$1,103,000

THROUGH TRADE.

25,000 passengers each way, or 68½ per day, 50,000	a $10.....	$500,000	
330,000 barrels flour	a 50 cents.	115,000	
86,500 " pork, beef, and whiskey	a 60 "	51,900	
3,200 tons bacon	a $5.....	16,000	
630,000 sacks corn	a 12½ cents	78,750	
227,000 kegs lard	a 20 "	45,400	
156,000 pigs lead	a 20 "	31,200	
10,000 tons all other down freight	a $5.....	50,000	
30,000 " up freight	a $5.....	150,000	
			$1,038,250
Mail transportation			94,000
Total estimated receipts			$2,235,250

EXPENSES.

Transportation 73,000 passengers half distance, and 50,000 whole distance, equals 86,500 carried 470 miles; or 40,655,000 passengers carried one mile; which, at .840 per passenger, the actual cost on Baltimore and Ohio Railroad, (exclusive of horse power,) is	$341,502 00
Transportation freight, estimated in tons, equals 258,425 tons carried 470 miles, or 121,459,750 tons carried one mile; which, at .663 per ton, is	805,278 14
Total estimated expenses	$1,146,780 14
Total nett income	1,088,469 86

Which is equal to 15½ per cent on a capital of seven millions.

When the great diminution in cost of transportation over level or descending grades and straight lines, in comparison with frequent curves and heavy grades, is considered; and the advantages which the Mobile and Ohio Railroad will possess, in these respects, over any other road in the United States—except, perhaps, the Reading Railroad, in Pennsylvania—are remembered, our estimate of .663 per ton per mile is sufficiently high. On the Reading Railroad, with a heavy transportation, the cost is found not to exceed .500 per ton per mile. If, however, we increase our estimate from .663 to 1.000 per ton per mile, we should still have, by the above table, a nett income of $679,150 50, or nearly 7 per

cent on a capital of $7,000,000. The amount of tonnage, (258,425 tons,) and number of passengers, (123,000,) computed in the table, are, it is believed, rather under than over the mark. The Baltimore and Ohio Railroad Company transported in 1847, over that road, 288,000 passengers and 263,000 tons of freight.

The superior advantages of railroads over every other mode of transportation, are becoming every day more apparent. Their speed, their certainty and regularity, will always ensure them the preference over river routes, at rates moderately higher. This we have seen, whenever they have been brought in competition. But nowhere would these advantages be more strikingly displayed, than upon the route in contemplation. Commencing on the seaboard, at one of the best harbors on the Gulf, it penetrates to the very heart of the Mississippi valley. It opens an avenue by which commodities can be conveyed to the Gulf in from twenty-five to thirty hours, with perfect safety, at a cost not higher than at present, by a devious and hazardous route, requiring from four to six days to accomplish. At low rates, the business of this road will only be limited by its capacity to transport. The saving of river insurance alone would be sufficient, on all articles of value, to decide transportation in favor of the road.

In a military view, this is an undertaking of the highest national importance, and well worthy the attention and favor of government. In time of war, the facility with which troops and munitions could be transmitted by this road from the interior to the seaboard, would save an immense sum to the country.

By an inspection of the map, the relations between the Mobile and Ohio Railroad and other great lines of railway now in progress, will be easily perceived. To the Baltimore and Ohio, and the Cincinnati and Sandusky railroad companies, the completion of this road will be of great value, by throwing upon those lines a large amount of travel that would otherwise seek different channels. To the cities of Louisville, Cincinnati, and St. Louis, it will open new avenues of trade, and new elements of prosperity. Like a great river, it will have its tributaries on either side, and thus draw into itself the trade of a vast country. In short, not one, among all the various projects now inviting the attention of capitalists, offers greater inducements for the investment of capital, or promises to be more valuable, as an element of national wealth, than the Mobile and Ohio Railroad.

Since the above was written, we have been kindly favored with a copy of the following letter from Professor A. D. Bache, Superintendent United States Coast Survey, to our friend and townsman, S. G. Fisher, Esq., concerning the recent discoveries in Mobile Bay, made by the Survey, under the immediate direction of Lieut. Com. Pattison, United States Navy. In connection with the Mobile and Ohio Railroad, these discoveries are of the highest importance, establishing conclusively, as they do, the superior advantages of Mobile Bay over any other harbor of the Gulf, as the seaboard terminus for a great system of internal improvement.

COAST SURVEY STATION, *near Manchester, N. H., Sept.* 5, 1848.

S. GRIFFITTS FISHER, ESQ., *of Mobile.*

DEAR SIR:—In reply to your request, for the most recent information in regard to the changes at the entrance to Mobile Bay, and to the depth of water of 20½ feet upon the bar, I send you the following extracts from a recent report by Lieut. Com. C. P. Pattison, United States Navy, the Assistant in the Coast Survey, to

whom the credit is due for the excellent progress and interesting discoveries made in the hydrography of that section of the survey:—

1st. The depth of water which can be carried over the bar at the entrance of Mobile Bay at mean low water, is 20¼ feet mean rise, and fall of tide one foot.

2d. The channel is perfectly easy, one course N. 19° W. true, going through with one or two casts on the ridge of shoalest water.

3d. Continued strong northerly winds depress the water at the extreme 2 feet below mean low water; and continued south-east and south winds elevate it 2½ feet—in rare cases to an extreme of 4 feet.

4th. In heavy gales, the sea is said to break across the bar. This I have never seen, but judge it must be the case.

5th. After crossing the bar the channel varies from one-half to seven-eighths of a mile in width, averaging 7 fathoms in depth, and perfectly clear.

6th. The depth of water immediately at the end of the wharf at Fort Morgan, Mobile Point, is 6½ feet; 150 yards out, there are 5 fathoms; and in mid-channel, abreast of the wharf, one-third of a mile out, there are 9 fathoms.

7th. The depth of water at the anchorage of the fleet of merchant vessels in the bay, is 3½ fathoms. There is perfectly secure anchorage, in any winds, for large vessels off the west end of Mobile Point, with the light-house bearing from S. E. to S. S. W. in from 8 to 10 fathoms water, and distant from the shore from one to one-tenth of a mile.

8th. There is a fine harbor for small vessels drawing not over 12 feet in Navy Cove, just to the north end of Mobile Point, secure in all winds, and easy of entrance.

9th. Pelican Island in 1822 was 1,723 yards long, in 1841 it was 2,757, and in 1847 it had increased to 3,457 yards, making an increase of 1,735 yards in 25 years. The north end of this island had made a few yards further out in 1848. The shore of Dauphin Island, to the northward of Pelican, had cut out a few yards, so keeping the distance between them nearly the same.

10th. The distance between the north end of Pelican Island and Dauphin Island in 1822 was 1,957 yards; in 1841, it was 788; and in 1847 it was but 383 yards. The depth through this channel has remained the same since 1822, being 13 feet at mean low water.

11th. Sand Island, upon which stands the outer light-house, was in 1822 but 131 yards across; in 1841, it was 1,542 in length; and in 1847, it had decreased to 908 yards. This island is constantly undergoing increasing or decreasing, as the various causes of change act upon it. Within the last year, the north point has been cut off for a distance of 60 yards, and the east shore for an average width of 15; whilst the shore to the north of the light-house has made out 60 yards. A small channel 10 or 15 yards wide, and 6 feet deep, which separated the north point from a small bank dry at low water, was filled during one spring ebb tide.

12th. Little Sand Island, as it is called, where was in 1822 from 3 to 10 feet water, had made up into an island in 1841 of 952 yards in length, and increased to 2,625 yards in 1847.

13th. In 1822 the greatest depth which could be taken over the bar was 17 feet; in 1841 it was 19 feet; and in 1847 it was 20¼ feet, each at mean low water.

14th. In 1822, the distance from the position in which Sand Island light-house now stands, to the shoalest water in the channel on the bar, was 3,446 yards; in 1841, it was 3,531; and in 1847, it was 3,724 yards.

15th. Upon a line of soundings which took over the bar in 1841 but 13 feet, in 1847 the depth was 20 feet.

16th. The changes constantly taking place cannot better be illustrated than by the frequent appearance and disappearance of Little Pelican Island, which is often several feet above water, and as often as many below it.

From these facts, it appears that the islands have been on the increase since 1822, whilst the bar itself, connected with them, has passed gradually seaward, deepening as it advanced.

Yours respectfully and truly,

A. D. Bache, *Supt. United States Coast Survey.*

Art. II.—COTTON: AND THE COTTON TRADE.

If we examine the causes that have produced the present low prices in cotton, our attention is immediately directed to the wars and political disturbances in Europe. The consumption of cotton manufactures is considerable in Prussia and Denmark, Naples and Sicily, Sardinia, Lombardy and Venice, where actual hostilities have been waged for a large part of the past year; while in France and Germany, where revolutions have occurred, the demand is large, both for manufactured articles and the raw material. But not only in these countries have political troubles lessened the consumption. The Chartists in England, the Repealers in Ireland, and the Carlists in Spain, though their movements have not been so successful as to be honored with the name of revolutions, have excited alarm and disturbed that confidence which is so necessary to the operations of industry and commerce. Besides these political causes which have affected the demand and the price of cotton, the commercial and financial embarrassments which prevailed throughout Europe at the beginning of the year, and the large crop of the past season, and the fine prospects of the one now gathering, have exerted more or less influence.

To separate these causes, it may be remarked that the supplies of 1848, or even of 1849, would not have been equal to the demands of the present year, if there had been no foreign decline in the consumption since 1845 or 1846, (see Tables I. and II. at the end of this article.) This will show satisfactorily that the present low prices are not to be attributed to over production, but to other causes. These are principally the political troubles in Europe; but if we examine the English exports for the present year, and compare them with former years, (Table III.,) we will find that although there has been no falling off in the exports to Belgium, Greece, Holland, Portugal, Russia, Sweden and Turkey, where quiet and order have not been disturbed, and although the deficiency in the exports to Austria, Denmark, France, Germany, Naples and Sardinia, where wars and revolutions have interrupted the pursuits of commerce, is very large, yet the amounts sent forward to the British possessions, and to other countries out of Europe, have sensibly declined. It follows from this that political troubles have not been the only causes of the present decline. Two large crops in the United States, when connected with the falling off in the English exports to Asia, Africa and America, would have brought down prices below their average rates; and as this average, since 1840, is about $7\frac{3}{4}$ cents, (Table IV.,) and as the present price for middling fair cotton is about $5\frac{1}{2}$ cents, (October 28th,) the decline produced by political causes must be less than this difference of $2\frac{1}{4}$ cents. If, then, the prospects of general peace should increase, the price may be expected to rise and range between the present rates and the average; but if, on the contrary, hostilities should be renewed, especially if England, France or Russia should become involved in the quarrels of the other States, we may look for a still further decline. As the chances of permanent peace in France, Italy or Germany, or of a general war involving England and Russia, are both very small, no material change in the present prices can now be expected.

These general remarks on the probable price of cotton for the coming year it is necessary to make, before the supply and the demand can safely

be estimated. Low prices not only diminish the English imports from the East Indies, but also the receipts at the American ports. When cotton falls to the present low rates, our planters hold back their crops, diminish their production, and wait for the coming of better times. In India, more is retained for domestic use, and more is shipped for the Chinese market. The opposite effect is produced by advancing prices. This influence is felt more decidedly in the demand than in the supply. A large crop and low prices, universally bring a great increase in the consumption. The present year is an example of this. Although the prices in January and February were good, and the commercial embarrassments of 1847 were still exerting their influence, and violent political agitation was disturbing nearly every country in Europe, still the consumption has largely advanced over 1847, on account of the low rates to which cotton has now fallen. So it has always been, and so it will be hereafter. Low prices lessen the supply and increase the demand, while high prices produce the opposite effect.

In considering the supplies from the United States, it may be remarked, that the amount of the old crop in the hands of the planters is unusually large. This is especially true in the Atlantic States, where most of the cotton is sent to market by railroads. But the same is true also in the West. This is the natural effect of low prices, and still more of declining prices. The planting for the present year has been large; the season has been long; the spring early and the frost late; the picking began soon; and the weather for the picking season has been very fine. Scarcely a rainy day occurred in September, and in October there were very few. No general blight has overtaken the crop. The ravages of the caterpillar and boll worm have been local and limited. The rust and the rot have done but a partial injury. There was too much rain in the summer, the drought succeeded suddenly, and many of the forms dropped off without maturing. These and other drawbacks have not been general or of great importance, especially when compared with the disasters of last year. We may therefore expect that the crop will be large and the receipts greater than in any former year. From South Carolina and Georgia, the number of bales sent to market in September and October have more than doubled those of last year, showing the early state of the crop, and the large amounts of last year's cotton in the hands of the planters. In these two States, I would estimate an advance of 20 per cent over last year's receipts. In Florida, a large increase may be expected. Not that their crop is so superior, but because the disasters that have been so ruinous there for the last two years, have not been felt. The rust has done some harm, but the ravages of the worm were stayed by the hot and dry weather at the end of August. The planting was generally large, and along the Chattahoochee the increase in the production will be very great. From Alabama, the reports have been almost uniformly favorable. In the spring and summer they were very good. In August, the complaints of the boll worm were numerous, but the fine weather of September and October have revived the hopes of the planters. Remembering how extensive was the failure of last year, an advance of 15 or 20 per cent may, I think, be looked for. At New Orleans, we cannot expect any increase, because their last year's crop was very fine. A heavy storm in September injured the opening cotton throughout Mississippi and Louisiana. The worm has been busy in North Alabama and Tennessee. An increase may

be expected in Arkansas and Texas, but not from any other portion of the country which finds a market at New Orleans. Still, as many circumstances have been favorable to a large yield, no falling off in the receipts can be anticipated. For the whole Union, I would estimate the crop of 1849 at 2,550,000 bales. (Table V.) Were it not for the low prices, the estimate might be larger, as I do not doubt that the actual production, added to the stocks on hand, considerably exceeds this amount.

The imports from the East Indies must rapidly decline in 1849. When Surat and Madras are quoted in Liverpool at 3 pence for fair cotton, it is impossible to look for the usual receipts from India. The long voyage, the heavy freights, the delays in receiving payments after a shipment is made, the expensive inland transportation before the cotton is brought to the seaports, cannot be paid for, considering the inferior quality of their cotton. Low prices do not produce their effect immediately on so distant a market, but the depression has now continued long enough to exert their legitimate influence. By considering the advance and the decline in the East India imports in former years, according as they were encouraged or not, by the condition of the European market, I cannot estimate the receipts from this source to exceed 100,000 bales for 1849, although, for 1847 and 1848, they are over 200,000 bales. (Table VI.) This is lower than the imports for any former year, excepting 1846, but the discouragements to large imports from India are now greater than at any former period.

From Brazil the supplies may fall off because of the low prices, but this deficiency will be made up by the increase from Egypt. The interruption in the demand at Marseilles and Trieste, because of the political troubles in France and Austria, will divert a larger portion of Egyptian cotton to Great Britain. As the whole of these supplies is small and nearly stationary, there will be no difficulty in making an approximate estimate for the coming year. The imports into England from South America, the West Indies, and Egypt, will be about 150,000 bales for the present year, (Table VII.,) and I would anticipate the same for 1849.

We thus have the total supply for these sources for 1849, at 2,800,000 bales. (Table I.) This exceeds considerably the amount of any former year, but as prices are very low, and as the consumption in the United States has gone steadily forward, the demand will nearly equal this, in spite of the wars and disturbances in Europe. The stocks on hand are not extraordinarily large at present, (Table VIII.,) and this slight increase can be borne without further depressing prices.

The largest consumer of cotton is the United States. England is the great workshop, indeed, of the world, but the actual consumption in our country exceeds that of Great Britain and Ireland, and all the English possessions in the four quarters of the globe, including the English exports to Gibraltar and India, whence doubtless large amounts are re-exported to Spain and the East India Islands. The New York Shipping and Commercial List, which is the highest authority on this subject, gives 607,000 bales as the American consumption for 1848. Of this, 523,000 bales was delivered to the factories at the North, and 75,000 was the estimated consumption in the South and West. This estimate is probably too low—certainly the amount allowed for Georgia is not near as large as it ought to be. But taking this number and turning the bags into pounds, at 400 pounds each, the amount reaches 423,000,000, which exceeds

the average of the last three years in England (Table IX.) by 7,000,000 pounds. As the increase in our country is more rapid than in any other, we may be regarded hereafter as the largest consumer in the world. The home market, however undervalued, is thus the most important of all. I have taken no notice of our imports and exports of cotton goods, supposing that they will nearly balance each other. In value, the imports are double the exports; but the former being light and valuable, while the latter are coarse and cheap, the weight of both is probably about the same. Our consumption for 1849 may be estimated to be larger than for 1848, as the amount has uniformly increased for many years past. It was feared that the low tariff of 1846 would diminish the home demand for the raw material, but experience has happily dissipated these fears. The importations of cotton manufactures have increased very largely; but the enterprise and industry of our manufacturers have not only kept the market for heavy goods in their own hands, but, even in the finer articles, they have forced the importers to lessen the supplies with which they at first deluged the market. (Table X.) The consequence has been, that the onward progress of our home consumption has suffered not the slightest check. (Table XI.) For 1849 I would estimate the wants of the northern manufacturers at 550,000 bales; the amount consumed in the South and West being excluded from the estimated receipts, is also excluded from the estimated demand.

The wants of Great Britain for her home market will be as large in 1849 as in any former year. The harvests have now been good for two successive seasons, and the stocks of grain have accumulated. The total repeal of the duty in March next will bring down the prices for corn still lower than they now are. The work on railroads is going on briskly, and the demand for labor on these new works will be considerable. The manufacturing towns and iron districts, though not in a prosperous condition, have fair wages, and but few of the furnaces are out of blast, and few of the mills are working short time. The currency is undisturbed, and the rate of interest low. The home consumption is about 30 per cent of the whole, (Table IX.,) and this part of the demand may be expected to be as large as in 1845. If we examine the exports to that part of Europe undisturbed by wars or revolutions, (Table III.,) we will find no diminution in their demand for English manufactures. This includes Belgium, Greece, Holland, Portugal, Russia, Sweden, and Turkey, and receives 25 per cent of the whole amount exported. The goods forwarded to Austria, Denmark, Germany, Lombardy, Naples, Sardinia, and Sicily, have fallen off fully one-third below the average, and no revival in this trade can be reasonably expected for the coming year. The exports to the British possessions, and to other countries out of Europe, have declined in 1848, but that is in part to be attributed to excessive supplies sent to these countries during the financial troubles of last year. We may, therefore, expect that the deliveries to the trade for 1849 will exceed the consumption of the present year, and though it may not reach the amounts of 1845 and 1846, it will approach nearly to those limits. For 1849, I would estimate the English demand at 1,450,000 bales, against 1,570,000 in 1845, 1,560,000 in 1846, 1,140,000 in 1847, and about 1,300,000 in 1848.

The exports from the United States to France during the present year have increased from 241,000 to 279,000 bales, but each of these is much

less than the exports of previous years. The deliveries to the trade for the first eight months of 1848 were 193,816 bales, against 194,248 in 1847, but the consumption of American alone had increased. The political troubles have not, therefore, been more disastrous to the manufacturer than the scarcity and high price of food in 1847. With the low prices that are anticipated for 1849, the consumption will probably advance. The amount of American cotton wanted for the coming year will not probably be less than 300,000 bales, against 356,000, the average for the five years ending December 31st, 1846. The consumption for the present year will be 270 or 280,000, and an increase of 20 or 30,000 bales may be safely expected.

The consumption on the other parts of the continent has advanced over last year, but is probably less than in 1845 or 1846. The diminished wants of Germany and Austria are balanced by the increase in Russia, Belgium, Holland, and Spain. The average consumption of the continent has been for the last five years (Table XII.) 391,000 bales, and for the last four 412,000 bales. For the present year it will probably reach 420,000 bales, and an advance rather than a decline may be expected.

From this review of the wants of Europe and America, it would appear that the demand for 1849 will probably amount to 2,720,000 bales, (Table XIII.,) and this will cause an increase in the stocks of 80,000 bales. As the stocks in Liverpool are now 140,000 bales over those of last year, a still further increase cannot fail to keep down prices to very low limits. Not, indeed, below their present rates, for the stocks are not near as large now as they have been formerly, (Table VIII.,) and they will bear this increase without further depressing prices. The prospects of the planters are gloomy indeed. The proper remedy is to lessen the production, and this will doubtless be done. Self-interest will prompt them to look for other employment for capital than the raising of cotton at 5 or 5½ cents per pound. Until this is done, no improvement in prices can be reasonably expected.

TABLE I.

SUPPLY OF COTTON.

	1847.	1848.	1849.
Crop of the United States.....bales	2,101,000	2,348,000	2,550,000
English import from East India.....	223,000	ab't 200,000	100,000
" " " other places.....	131,000	" 150,000	150,000
Total supply from these sources.....	2,455,000	2,698,000	2,800,000

TABLE II.

DEMAND.

	1845.	1846.
Consumption in Great Britain.....bales	1,577,000	1,561,000
Consumption in the United States.....	423,000	428,000
French deliveries of American.....	351,000	375,000
English and American export to other countries.....	406,000	399,000
Increase in the American demand for 1848.....	109,000	104,000
Total demand (had there been no decrease in Europe).....	2,866,000	2,867,000

TABLE III.

ENGLISH EXPORTS OF COTTON MANUFACTURES, INCLUDING PLAIN AND PRINTED CALICOES AND COTTON YARN.

	For the first six months of			
	1845.	1846.	1847.	1848.
To British possessions.....in millions of lbs.	54	59	54	45
European States, undisturbed.....	60	49	37	53
" " more or less disturbed.....	40	45	32	28
All other countries.....	65	52	69	49
Total exports.....	219	205	192	175

TABLE IV.

AMERICAN EXPORTS, VALUE, AND AVERAGE PRICE.

Year.	Export in lbs.	Value.	Price in cts.	Crop in lbs.	Value whole crop.
1840.....	743,900,000	$63,870,000	8.6	870,000,000	$74,820,000
1841.....	530,200,000	54,330,000	10.2	654,000,000	66,708,000
1842.....	577,500,000	47,590,000	8.2	674,000,000	55,468,000
1843.....	817,300,000	49,120,000	6.0	952,000,000	57,120,000
1844.....	663,600,000	54,060,000	8.1	812,000,000	65,772,000
1845.....	872,900,000	51,740,000	5.9	958,000,000	56,522,000
1846.....	547,600,000	42,770,000	7.8	840,000,000	65,520,000
1847.....	527,200,000	53,450,000	10.1	711,000,000	71,811,000
1848.....	.....	.....	ab't 7.	940,000,000	65,800,000
Total.....				7,411,000,000	$579,541,000

Average price, 7 cents and 8 mills.

TABLE V.

UNITED STATES CROP.

	Receipts			Estimate for
	1846.	1847.	1848.	1849.
New Orleans.....bales	1,037,000	706,000	1,191,000	1,190,000
Mobile.....	422,000	324,000	436,000	500,000
Florida.....	141,000	128,000	154,000	180,000
Texas.....	27,000	8,000	40,000	50,000
Georgia.....	195,000	243,000	255,000	290,000
South Carolina.....	252,000	350,000	262,000	330,000
Other places.....	27,000	20,000	10,000	10,000
Total.....bales	2,101,000	1,779,000	2,348,000	2,550,000

TABLE VI.

ENGLISH IMPORTS FROM EAST INDIA.

Years.	Import.	Remarks.
1825 to 1833.....average bales	73,000	Declining prices.
1833 to 1841..... "	140,000	High prices.
1841 to 1843..... "	265,000	Chinese war.
1843 to 1845..... "	210,000	Peace and low prices.
1845.....	155,000	" "
1846.....	95,000	Low prices and repeal of duty.
1847.....	223,000	Advance in prices.
1848.....about	200,000	Declining prices.
1847.....six months	87,000	Advance in prices.
1847.....Oct. 6th, Liverpool	93,000	" "
1848.....six months	102,000	Declining prices.
1848.....Oct. 6th, Liverpool	87,000	" "
1849.....about	100,000	Very low prices.

TABLE VII.

ENGLISH IMPORTS FROM EGYPT, AND EAST AND WEST INDIA.

1843.....bales	165,000	1847...Six months.....bales	53,000
1844.....	197,000	1848... "	55,000
1845.....	201,000	1847...Oct. 6th, Liverpool.....	77,000
1846.....	158,000	1848... " "	93,000
1847.....	138,000	1848...Whole year about.....	150,000

TABLE VIII.

STOCKS.

Year.	Liverpool.	G. Britain.	France.	Rest of Contin't.	Total.
1840, Dec. 31st. bales	366,000	464,000	94,000	114,000	672,000
1841	430,000	550,000	136,000	75,000	761,000
1842	457,000	551,000	138,000	122,000	821,000
1843	654,000	786,000	119,000	150,000	1,055,000
1844	741,000	903,000	78,000	120,000	1,101,000
1845	885,000	1,060,000	69,000	90,000	1,219,000
1846	439,000	549,000	30,000	39,000	618,000
1847	364,000	452,000	63,000	76,000	591,000
1847, Oct. 6	386,000	.....	Sept. 1. 53,000	.....	.....
1848	533,000	.....	" 95,000	.....	.....
1848, Dec. 31	ab't 580,000	.....	ab't 80,000	.....	ab't 800,000

TABLE IX.

CONSUMPTION IN GREAT BRITAIN AND HER DEPENDENCIES.

	1845. Millions of lbs. Burns.	Holt.	1846. Millions of lbs. Burns.	Holt.	1847. Millions of lbs. Burns.	Holt.	Average. Mill. of lbs.
Weight manufactured	494	528	495	533	362	391	467
" exported	337	358	354	377	288	311	337
" consumed at home.	157	170	141	156	74	80	130
Exported to Brit. Possess...	85	....	87	....	67	...	80
Total amount consumed by British subjects							210
Add for waste 1¼ oz. in every lb. of the raw material							26
Total amount of raw cotton used by British subjects							236
Amount consumed in the United States in 1848							243

TABLE X.

BRITISH EXPORT TO THE UNITED STATES.

Year.	Calicoes, printed and dyed. *Yards.*	Calicoes, plain. *Yards.*	Other cottons. *Yards.*
1845 (First six months of)	8,803,000	7,963,000	4,809,000
1846 " "	6,360,000	5,367,000	2,480,000
1847 " "	20,972,000	22,131,000	5,734,000
1848 " "	19,220,000	9,950,000	3,996,000

TABLE XI.

AMERICAN CONSUMPTION.

Year.	American consumption. *Bales.*	Average for three years. *Bales.*	Increase, per cent.	Year.	American consumption. *Bales.*	Average for three years. *Bales.*	Increase, per cent.
1843...	325,000	305,000	3.4	1846...	423,000	386,000	9.0
1844...	347,000	321,000	5.2	1847...	428,000	413,000	7.0
1845...	389,000	354,000	10.3	1848...	523,000	458,000	10.0

TABLE XII.

CONSUMPTION ON THE CONTINENT.

Year.	English exports.	American exports to the continent.	Stocks on the 31st December.	Apparent consumption.
1844 bales	135,000	144,000	120,000	309,000
1845	121,000	285,000	90,000	437,000
1846	194,000	205,000	39,000	450,000
1847	208,000	169,000	76,000	340,000
1848	220,000	255,000	.....	ab't 420,000

TABLE XIII.

DEMAND.	1848.	1849.
English consumption of all kinds bales	ab't 1,300,000	1,450,000
American " "	523,000	550,000
French deliveries of American	ab't 275,000	300,000
English and American exports to other countries	ab't 420,000	420,000
Total from other sources	2,518,000	2,720,000

Art. III.—THE LAW OF SICKNESS, AND ITS APPLICATION TO HEALTH INSURANCE AND BENEFIT SOCIETIES.

WITHIN the last three years several companies have been formed in this country for the purpose of effecting insurance against the pecuniary loss and inconvenience occasioned by sickness. Although the idea appeared novel, yet the same thing, substantially, was practised by the various secret and other benevolent societies which have abounded for years past. Their system of dues and benefits is only another name for effecting an insurance by paying premium. The object sought to be accomplished is one very praiseworthy and benevolent, and of great service to a large and valuable part of the community; but as all did not wish to become members of secret societies, which, until health insurance companies were formed, was the only mode of compassing security of this kind, such institutions were deemed necessary. There is no kind of insurance which may be made more generally useful than this, for it contemplates a provision for the wants of an individual or family at the very time when such provision is most needed; and whatever sums are paid to the insured, the value is greatly enhanced by the consideration that it is not the result of benevolence or charity, but proceeds from his own wise and prudent forethought.

When the hand of affliction is laid upon an individual, his health gone, and his physical energies paralyzed, what pleasure must the reflection give him who has by an insurance provided for the support of his family, or secured for himself medical aid and those comforts which a sick bed require.

We do not wish to dwell here upon the various uses to which health insurance may be applied, or to enumerate the classes of persons to whom the practice would be beneficial; our object is rather to exhibit some important facts in vital statistics, and apply them to the business of those societies and companies. Recent investigations made in Europe show the average amount of sickness experienced by persons of different ages; others show us how health is influenced by locality and other causes; and we shall now proceed to give the result of some of those investigations, and state the source from which they originated.

The number of friendly societies in Great Britain, and the vast number of persons belonging to them as members, and the considerable sums which in the aggregate was annually contributed for the purpose of securing sick benefits, funeral money, &c., arrested the attention of Parliament, and an investigation was had, at the instance of the government, to ascertain whether the sums contributed were sufficient, under this mutual system, to secure the object contemplated. Startling conclusions were arrived at, for it was shown, with clearness little short of demonstration, that the failure of many societies which had already occurred was owing to circumstances which still existed, and were operating with equal certainty in those that remained. Not having any reliable data upon which to base their terms of membership, it was commonly regulated by caprice, and with a disposition to make the dues as light, and the benefits as large, as possible. Thus, the general error was discovered, that the contributions were too small to defray the obligations incurred. The necessity for receiving a much larger sum, during many of the earlier years of a

society's existence, than is required to meet the claims coming upon them during those years, so that an accumulated fund will be in their possession when the time arrives when the claims will be constantly greater than the receipts, has not been understood by the originators or managers of these institutions. The author of the statistics above referred to, Charles Ansell, Esq., F. R. S., who was employed to make the investigation, in his work on this subject, published under the superintendence of the Society for the Diffusion of Useful Knowledge, speaking of this subject, says:—"The number of societies who have existed long enough to bring the sufficiency of their contributions to the test of experience, bears a lamentably small proportion to the number that have become insolvent. In the early stages of such institutions the claims upon their funds are few. They have usually started with the great mass of their members in the prime of life, and in robust health, so that, for a while, nearly all their receipts have appeared to be profits. It is only when advancing age, increased sickness, or permanent infirmity, together with accelerated claims for funeral money, press heavily on the funds, that it is discovered the original contributions have been inadequate to provide for the benefits promised to the members; and when insolvency shows itself, the ruin produced by it to the elder members comes at a time when their vigor is forever gone, and they are no longer capable of realizing by their labor the means of beginning anew to make that provision for their helpless age, which, to their credit, they had for the best proportion of their lives been honorably striving to effect."

The society for diffusing useful knowledge caused blank forms of schedules to be printed and sent to friendly societies in most of the counties in England, and from almost every part of the country returns of them filled up were received. Information was by this means obtained of the actual experience of a large number of societies, embracing several thousand members, taken indiscriminately from all parts of England, while passing through in the aggregate 24,323 years of life, principally between the age 20 and the age 70. We will not give the intricate and ingenious process by which the following table was deduced from the societies' returns, as it would take much time and space, and would after all only be interesting to the scientific reader.

Age.	*	Age.	*	Age.	*
20	.776	37	1.009	54	2.120
21	.780	38	1.040	55	2.256
22	.785	39	1.074	56	2.410
23	.791	40	1.111	57	2.586
24	.798	41	1.151	58	2.788
25	.806	42	1.195	59	3.021
26	.815	43	1.243	60	3.292
27	.825	44	1.295	61	3.611
28	.836	45	1.351	62	3.991
29	.848	46	1.411	63	4.448
30	.861	47	1.475	64	5.001
31	.876	48	1.554	65	5.672
32	.893	49	1.619	66	6.486
33	.912	50	1.701	67	7.471
34	.933	51	1.791	68	8.659
35	.956	52	1.890	69	10.086
36	.981	53	1.999	70	11.793

* Quantity of sickness experienced in an individual in the year following each age, expressed in weeks and decimals of a week.

A glance at the above will be sufficient to show its importance in determining the actual liabilities of friendly societies—Odd Fellows, Rechabites, Sons of Temperance, &c.

The first inquiry that arises is, whether the results here given may be depended upon; and after considering the data from which the tables were deduced, and on examination of the table itself, considerable confidence in it must be accorded. But we have more information on the laws of sickness proceeding from other sources, embracing the experience of other persons and societies, covering another period of time, and collected and arranged by another person, which goes to sustain the general accuracy and reliability of the above tables, which had reference to the five years 1823–1827. The data from which the following law of sickness was deduced consists of the quinquennial returns for 1836–1840, made under the friendly societies' act, 10 George IV., as amended by 4 and 5 William IV., and by sending blank schedules to be filled up, a prize being offered as a reward to those whose returns were the most full and complete. The material thus collected was used by F. G. P. Neison, F. L. S., who read the result of his labors before the Statistical Society in 1845. We have in this production a vast amount of curious and useful information respecting the rate of mortality and the laws of sickness, and the influence of locality and occupation on health and longevity. The sickness tables are of various kinds, discriminating between the experience of the rural, town, and city districts, and between the experience of England and Scotland.

AVERAGE SICKNESS PER ANNUM TO EACH PERSON AT THE FOLLOWING AGES, EXPRESSED IN WEEKS.

ENGLISH AND WELSH DATA.

Age.	Rural district.	Town district.	City district.	Rural, town, and city district.	Age.	Rural district.	Town district.	City district.	Rural, town, and city district.
20.....	.8387	.8564	.5659	.8398	46.....	1.2900	1.9908	1.8964	1.5688
21.....	.8397	.8678	.6762	.8453	47.....	1.3417	2.1423	1.9954	1.6528
22.....	.8426	.8746	.7713	.8515	48.....	1.4089	2.2871	2.1095	1.7461
23.....	.8475	.8767	.8511	.8585	49.....	1.4915	2.4249	2.2388	1.8486
24.....	.8542	.8741	.9157	.8661	50.....	1.5896	2.5559	2.3831	1.9603
25.....	.8630	.8649	.9650	.8744	51.....	1.7031	2.6800	2.5426	2.0812
26.....	.8736	.8551	.9991	.8834	52.....	1.8335	2.8168	2.7144	2.2161
27.....	.8802	.8504	1.0303	.8915	53.....	1.9808	2.9662	2.8985	2.3650
28.....	.8827	.8529	1.0584	.8988	54.....	2.1450	3.1280	3.0949	2.5279
29.....	.8810	.8626	1.0837	.9052	55.....	2.3260	3.3029	3.3036	2.7047
30.....	.8753	.8794	1.1059	.9107	56.....	2.5240	3.4903	3.5246	2.8956
31.....	.8655	.9035	1.1252	.9154	57.....	2.7756	3.7450	3.7545	3.1371
32.....	.8630	.9287	1.1480	.9250	58.....	3.0811	4.0670	3.9932	3.4293
33.....	.8677	.9551	1.1742	.9396	59.....	3.4402	4.4564	4.2408	3.7722
34.....	.8798	.9827	1.2040	.9591	60.....	3.8531	4.9132	4.4973	4.1657
35.....	.8991	1.0114	1.2372	.9836	61.....	4.3198	5.4373	4.7626	4.6099
36.....	.9257	1.0414	1.2740	1.0130	62.....	4.9308	6.1219	5.0357	5.1904
37.....	.9551	1.0819	1.3152	1.0474	63.....	5.6863	6.9670	5.3167	5.9073
38.....	.9872	1.1330	1.3611	1.0869	64.....	6.5862	7.9726	5.6054	6.7605
39.....	1.0221	1.1947	1.4114	1.1313	65.....	7.6305	9.1387	5.9019	7.7501
40.....	1.0677	1.2669	1.4663	1.1808	66.....	8.8192	10.4652	6.2062	8.8760
41.....	1.1002	1.3498	1.5258	1.2353	67.....	10.0700	11.9646	6.7643	10.0679
42.....	1.1398	1.4477	1.5901	1.2939	68.....	11.3829	13.0368	7.5761	11.3257
43.....	1.1786	1.5608	1.6593	1.3565	69.....	12.7579	14.2817	8.6417	12.6494
44.....	1.2166	1.6890	1.7335	1.4232	70.....	14.1949	15.4995	9.9610	14.0391
45.....	1.2537	1.8323	1.8125	1.4939					

With the aid of tables such as these it becomes easy, after determining how far they are likely to agree with the experience of this country, to

form a tariff of rates for a friendly society, which will be equitable, and conduce to permanency. This is very apparent, that the annual contributions or dues should be graduated according to the age of the party at entrance. Notwithstanding healthy persons, whose ages range between 20 and 50, may stand an equal chance for enjoyment of health for one year, yet there is a great difference in the value of the risk if extended for a term of years, or during life. Yet in most benefit societies all persons between 21 and 40 or 45 years of age are admitted on the same terms. The rates of premium charged by the *Eagle Life and Health Insurance Company* are formed strictly with reference to the risk as developed by these investigations, and being the fullest and most correct of any published, we subjoin them:—

ANNUAL PREMIUMS FOR AN INSURANCE OF $4 PER WEEK DURING SICKNESS, AND IN THAT PROPORTION FOR A GREATER OR LESS WEEKLY ALLOWANCE.

Age.	For term of 5 years.	For term of 7 years.	Up to age 70.	Age.	For term of 5 years.	For term of 7 years.	Up to age 70.
20	$5 25	$5 30	$8 00	36	$6 85	$7 00	$11 40
21	5 30	5 35	8 00	37	7 00	7 25	11 80
22	5 35	5 40	8 00	38	7 25	7 50	12 20
23	5 40	5 45	8 00	39	7 50	7 75	12 60
24	5 45	5 50	8 00	40	7 75	8 00	13 00
25	5 50	5 60	8 25	41	8 00	8 25	13 50
26	5 60	5 70	8 50	42	8 25	8 50	14 00
27	5 70	5 80	8 75	43	8 50	8 75	14 50
28	5 80	5 90	9 00	44	8 75	9 00	15 00
29	5 90	6 00	9 25	45	9 00	9 25	15 50
30	6 00	6 10	9 50	46	9 25	9 60	16 25
31	6 10	6 25	9 75	47	9 60	10 00	17 00
32	6 25	6 40	10 00	48	10 00	10 50	17 75
33	6 40	6 55	10 30	49	10 25	10 75	18 50
34	6 55	6 70	10 60	50	10 50	11 25	19 25
35	6 70	6 85	11 00				

A further investigation into the organization of secret benevolent societies, as they exist in England and in this country, discovers other radical errors in the terms on which they are conducted, and excites wonder that alarm is not created at their insecurity, and dissatisfaction at the inequality of the terms of membership. They agree to pay, besides the sick benefits, certain sums upon the decease of a brother, and a brother's wife; this is, therefore, merely a life insurance to that amount, and justice to all manifestly requires that the initiation fee, which is understood to be the consideration for the promised funeral money, should be graduated according to the age of the party at entrance. In most of these societies, however, as was remarked above, no difference is made in the charge for admission between the age of 20 and 45, while the difference of the expectation of life, according to the best tables of mortality, is about 16 years. We think it needs no argument, beyond the statement of the fact, to show that if the society may expect to enjoy the interest of the sum paid sixteen years longer in one case than in the other, considerable difference should be made in the sum demanded from two persons who ask admittance when there is such a disparity between their ages.

The prosecution of this subject further would be a digression, as it concerns the laws of mortality and not sickness, but at another time we may discuss it with the hope that their attention being called to the subject, reforms will be made that will conduce to equity and permanency in their organization, and thus increase their usefulness. It is to be regretted,

however, that there is such a disposition to cling with tenacity to old ways, notwithstanding the folly of such practices is apparent on every side. Occasionally a lodge which has been in existence several years accumulates funds rapidly, and may really be in a prosperous condition, owing to the falling off of many of its members who have paid their initiation, and the influx of new ones—young, healthy men. Such cases seem to be constantly before the eyes of other and less fortunately situated lodges, and serve to cheat them into a belief that, because they are similarly organized, they will also be, ultimately, as successful.

The following extract from the report made by a sub-committee of a district in England, containing 5,000 members of the I. O. O. F., is a summary of our views on this subject:—"So long as an influx of young members shall continue, the funds may appear to maintain a position which, to the eye of the inexperienced, may be altogether delusive. But when the original members shall have passed the meridian of life, and have begun to experience the infirmities of old age, the demands made upon the funds will necessarily be much larger. The stability of the institution will cause them to be fairly tested." And again they say:—"If the present system is permitted to continue, which seems not only to involve within itself the elements of dissolution, but is constructed on principles which act unfairly towards the younger portion of the members—thus, for example, a young man, eighteen years of age, is charged as much for his initiation as a man of thirty, while all the time the entry money of the former has been accumulating at compound interest; thus evidently showing that the entry money at eighteen is in reality nearly double of what it is at thirty, though undoubtedly it ought to be the reverse. . . . That it is unjust, and likewise unsafe to the well-being of a benefit society, that each member should pay an equal sum, whatever his age may be at the time of his entry."

These investigations into the laws of sickness have brought out this very interesting fact, that sickness and mortality do not bear the relation to each other of cause and effect, but that, on the contrary, the highest ratio of sickness is sometimes found associated with a favorable rate of mortality. It is ascertained that many trades have less than the general average of sickness, while they have a high rate of mortality, as bakers, for instance, whose expectation of life is considerably less than the average, while the ratio of sickness does not come up to it.

Again: clerks and tailors are found to be subject to a very high rate of mortality, but still they fall short of the average amount of sickness. Mr. Neison on this subject remarks:—"The most striking refutation of the theory that sickness and mortality bear the relation to each other of cause and effect, will perhaps be derived from a comparison of the general results of mortality in friendly societies in England for all districts combined, with that for Scotland."

The result of this comparison will be, that the rate of mortality in Scotland among the members of friendly societies is much higher than among the same class in England; and if the theory just recited were to hold good, there should also be found a greater amount of sickness in Scotland; but it is ascertained that such is not the case, and that, instead of there being an increased ratio of sickness, the ratio is actually below that of England. Nothing further need, therefore, be said on this subject; but the arguments may be rendered more obvious by an inspection

of the following table, in which it will be seen that while the excess of mortality is uniformly against Scotland, the excess of sickness is as constantly against England.

Age.	Mortality, per cent, in England.	Mortality, per cent, in Scotland.	Excess of mortality in Scotland, per cent.	Average sickness yearly in England.	Average sickness yearly in Scotland.	Excess of sickness in England, per cent.
30.....	.7563	.7926	4.7997	.9107	.8376	8.0268
40.....	.9386	1.0767	14.7134	1.1808	.9767	17.2849
50.....	1.4267	1.5830	10.9538	1.9602	1.8548	5.3818
60.....	2.5054	2.9096	16.1331	4.1657	3.9423	5.3628

It is much to be lamented that we have no data wherewith to ascertain the rate of sickness and mortality in this country. But there is consolation in the fact, that, if the government will do nothing, in a few years the experience of friendly or benefit societies and health insurance companies will supply the deficiency. The Eagle Company already number the persons insured with them by thousands, and as soon as practicable the rates will be deduced from their experience and published.

Art. IV.—PROTECTION OF VESSELS FROM LIGHTNING.

To the Editor of the Merchants' Magazine and Commercial Review.

In the Merchants' Magazine for June, 1846, I observe an article on this subject, affording much valuable information, from the pen of E. Meriam, Esq., of New York, to which we solicit the public attention. Among other matters obtained by his researches, are extracts from a report made to the British Parliament by a commission appointed by them in 1839 for this purpose. Parliamentary reports on various important subjects, are among the most valuable publications from the British press. They are made after much research and inquiry from the highest authorities, and comprise the most authentic information. From the investigations made on this occasion, we learn that, in cases of damage from lightning on board of British armed ships, they report one hundred and fourteen occurrences. Of these, forty-seven were line-of-battle ships, forty-nine frigates, and seventeen brigs and cutters. Of these, sixty-eight were struck on the mainmast, twenty-eight on the foremast, five on the mizen, and one on the bowsprit. Of these, also, fifty were struck both on the main and mizenmasts, six both on the fore and mainmast, and of sixty-one cases, the particulars are not mentioned. Of one hundred cases, it was found that sixty-two persons were killed and one hundred and fourteen wounded, exclusive of one case in which "several" were killed, and exclusive of the 44 gun frigate "Resistance," in which only four were saved—three hundred lives were probably lost on this occasion.

Of the spars damaged or destroyed, ninety-two were lower masts, eighty-two topmasts, sixty topgallantmasts, one royal, and one bowsprit.

After this fearful enumeration of injuries sustained, the Commission observe, "and no instance, so far as we are aware of, has ever occurred of a ship sustaining injury when struck by lightning, if the conductor was up to the masthead, and *the continuity uninterrupted to the water.*"

The following letter is published as an official document, in confirmation of the opinions adopted in that report:—

[EXTRACT OF A LETTER FROM CAPT. W. H. SMITH, ROYAL NAVY.]

"In my written orders, the officer of the watch was directed, whenever the weather appeared threatening, whether at sea or in port, to hoist the conductor, which was kept (*not in the storeroom*) in a box fixed to the stool of the after main-topmast backstay, and both officer and men were carefully instructed to place it so that the spindle would be always above the truck, and the chain carried into the water clear of the crosstrees, top, and channel, by outriggers."

This letter is from high authority, and we shall have occasion to recall the attention of our readers to some of its particulars. It certainly shows that there is but one conductor to a ship of war, and that much indifference exists among the officers about that one, from the highest to the lowest.

Ships of war, with their heavy batteries of cannon and masses of iron balls, are not more subject to injury from lightning than those in the merchant service, where no such metallic masses exist. Nor are the numerous steamers, with their elevated smoke stocks and massive machinery, more liable to such injury than other vessels. The railroads, too, with their vast expanse of horizontal iron and their flying cars, are not more subject to such accidents than other establishments. Nor are forts and castles, with their heavy armament, more liable to such injuries than private dwelling-houses. The reason for such exemption we ascribe to the broad superficies of metal, every part of which is in contact with the earth, the great receptacle into which the electricity is rapidly passing. The capacity of electrical conductors is not according to their massive bulk or weight, but proportioned to their superficial expanse. A superficies of tinfoil equal to that of the Princeton's heavy gun, would attract and convey just as much of the electrical fluid as it. On this principle Dr. Franklin advanced the opinion, that a roof of sheet iron would protect a house from lightning more effectually than other expedients.

But let us return to the injuries by lightning to vessels generally. Mr. Meriam continued his inquiries, extending them to the American navy and merchant vessels. He says, "I have kept a record of the damage done by lightning for a number of years. The catalogue now numbers more than four hundred cases of injury, or loss of life and property, but I have never yet found a case of injury to a human being in a vessel or building *protected by any kind of metallic conductor reared* for the purpose of protection." He addressed a letter to the Secretary of the Navy, and received the following answer:—

American Navy Department, August 2d, 1843.

SIR:—Upon the receipt of your letter of the 25th ult., making inquiry as to the sufficiency of the lightning conductors used on board our public vessels, I referred it to the Chief of one of the Bureaux for information as to their practical operation.

I am informed that the lightning conductors now and heretofore in use, have been found to answer well. None of our ships have ever been injured by lightning, *if the conductors were up*. Whether the rods may be reduced or enlarged, it would be difficult to say, until experiments have been made to test the point.

I am very respectfully, &c., DAVID HENSHAW.

E. MERIAM, ESQ., *Brooklyn*.

We also received the following from Capt. Silas H. Stringham, of the United States navy, then in command of the Ohio:—

The iron used for conductors of vessels of war in the navy is of the following

dimensions, viz: for sloops of war, one-quarter of an inch diameter; for frigates and ships of the line, five-sixteenths of an inch.

Respectfully, &c., S. H. STRINGHAM,
Capt. U. S. N. "Ohio."

We believe that it has been since found necessary to reduce the size and weight of the conductors on board of our sloops of war.

With evidence so conclusive that vessels *may be* protected from injury by lightning, let us inquire how it happens that so many lives are lost yearly from this cause, and so much injury sustained by persons and property. Instances occur at sea where vessels and cargoes, crew and passengers, are all destroyed by lightning, and none survive to narrate their misfortunes and sufferings. Vessels have been seen burning at sea, of which no other accounts were ever received; many are known to be lost at sea from casualties unknown, of which, from what we see and know, it is reasonable to suppose that a portion of them are destroyed by lightning. Mr. Meriam says:*—

In 1841 he recorded	8	vessels	struck	by lightning.
1842	" 6	"	"	
1843	" 6	"	"	
1844	" 17	"	"	
1845	" 14	"	"	

Fifty-one vessels struck by lightning in five years! an average of more than ten vessels yearly that we hear of, and who can say how many more have been destroyed, of which we can never hear! Why does this blight on commerce exist? Why such and so many occurrences so afflicting to humanity?

Besides the consequences here reported, there are others of great interest to navigation—to the successful prosecution of a voyage, and even to the lives and property of our fellow-citizens. A ship well found has always a good chronometer as well as good compasses provided. By an explosion of lightning, the polarity of the magnetic needle is destroyed, and the course of the ship can only be directed, as of old, by the heavenly bodies. The chronometer is also rendered useless. The temper of the steel pendulum and main-springs, the bushes, arbors, and chain, and of other important parts, is destroyed by the electric explosion and rendered magnetic, and the crew can no longer tell the longitude without resorting to the precarious calculations from the log-line.

Even in the British navy, whose discipline is in many respects admirable, the benefit derived from the single chain conductor allowed to each vessel, however great, is certainly contingent on the vigilance, care, and judgment of a junior and inferior officer. The officer of the watch will probably be a midshipman; he is made answerable for compliance with his written or verbal instructions, whenever the weather appears threatening, to hoist the conductor, &c. With the strictest attention to his duties, this gentleman may not be weatherwise, and, in case of misfortune, his plea of a mistake or error of judgment would excuse him, and ought to excuse him, for who of his senior officers has not been occasionally mistaken in his prognostics of the weather? The young man is accordingly sent back to his command with a charge to keep a sharp look out in future. He complies with his instructions, and having been previously mis-

* In an article published by him in Hunt's Merchants' Magazine for June, 1846.

taken in the threatening appearance of the sky, he now becomes too cautious. On the gathering of a cloud he orders up the conductor, and, on its clearing off, he orders the conductor down, to be hoisted up again, possibly, within his own watch. For such errors he would be roughly joked by his messmates, and possibly nicknamed by his own men. He consequently becomes careless and indifferent about conductors all the rest of his life, or adopts the opinion prevalent among seafaring men, that such conductors endanger the ship by attracting the lightning to it. Although, from the days of Dr. Franklin to the present, it has been repeatedly proved that even such a conductor, properly elevated and extended in *continuity to the sea*, does protect a ship from lightning, it is equally true that such a conductor, left in a bag or box at the heel of the topmast, with its spindle extended upwards, is more dangerous than having no conductor on board.

The chain conductors hitherto used for shipping are made of round wire, measuring about one-third of an inch in diameter. In the British navy they are of copper, and in merchant vessels of iron, in links about eighteen inches long, counected together by the ends of each link turned over and united by intermediate rings. The joints to the links are therefore clumsy, and the weight increased by those turns about one-third; the cost also is increased fully in that proportion. Besides this unnecessary cost, the weight of the chain conductor at the masthead is a very serious evil in stormy weather, and in the working the vessel. The iron conductors weigh from forty to fifty pounds each, and cost about $15 to $20; the sheet copper conductors weigh twenty-five pounds, and cost $8 each.

Carelessness in extending the conductor to the sea, or negligence in extending it in due time, is the cause of its discredit in the British navy. Who can doubt that a metallic spire, extended from the head of the royalmast to a bag or box containing the rest of the chain conductor, at the foot of the topmast, or anywhere short of the ocean, would collect the lightning that may be in the atmosphere, and increase the danger from explosion? Who, on the contrary, can doubt that if such conductor be duly extended to the water, its metallic point would silently drain off from the clouds their excess of electricity, and convey it without injury over the side? Who can doubt that his house is rendered secure from electrical explosions by a permanent *perfect* conductor? or that this conductor, if broken off, or otherwise interrupted in reaching the earth, would be more dangerous than none? And no one should doubt that his ship would be equally safe with a permanent *perfect* conductor extended from aloft over the side to the sea.

But unfortunately the ships' conductors have hitherto been loosely attached to spars that require to be taken down in threatening weather, the very time when a conductor is most needed. When these spars, or any of them, are lowered or carried away, the conductor goes with them, not for that spar only, but for the whole mast for the whole ship. The present ships' conductors are elevated through the truck at the head of the royalmast, above the topmast and topgallantmast, descending by the maintopmast backstay, until it passes over the side to the water. If the royalmast is removed, the conductor is also removed, and although it might be attached to the topgallant, or topmast, or lower mast, I believe that it

seldom, if ever, is so attached. The crew are then fully employed in taking in sail, and stowing away those heavy spars and their appendages.

That such want of attention and indifference about conductors prevails in the British navy, we infer from the numerous disasters detailed in the Parliamentary Report spoken of above. Also from the letter of Capt. W. H. Smith, therein published, saying that he keeps his conductor, *not in the storeroom*, but in a box at the stool of the backstay to the maintopgallantmast. This leaves a palpable inference that other captains in the British navy keep their conductors carefully stowed away in a storeroom, among the supplies of beans, bacon, and salt junk. I have heard also of another incident, in which, after a long search, the conductor was found in the bottom of the carpenter's tool-chest.

In a publication by W. Snow Harris, Esq., F. R. S., in the year 1844, two hundred and ten cases are alphabetically reported in the British navy alone of injury from lightning, greatly to the prejudice of the public interests, both in peace and war. He makes no allusion to the Parliamentary Report, or to the conclusions of the Board of Admiralty. He shows that the evil still exists, for, since those proceedings, eighteen cases of injury from lightning had occurred up to the date of his publication, and leaves the conclusion unavoidable, that some new or more efficient measures are highly necessary in the British navy.

I am told that in the British periodical, the United Service Journal, or Nautical and Army Magazine, may be seen a detail of the injuries sustained in the British commercial marine, equally or more extensive in proportion to those of the Royal Navy.

Hitherto our attention has been confined to the British navy, from which that of America was certainly modelled. We hope that the daughter has in some respects improved on the discipline and customs of the mother. With respect to the conductors, we believe that the plan and instructions are much alike, but that the American public ships have a conductor to each mast, and their constant use is more strictly enforced than in the British navy. We certainly hear of few or no disasters in the American navy, while those in the British navy are truly deplorable.

The flexible chain conductors, under the rigid discipline of the American navy, enforcing due attention to them, have been perfectly efficient. No injury is ever sustained in the American navy; for, with the numerous officers and men on board of each vessel, the duty is easily executed. When one of their vessels is undergoing repairs, or laid up in ordinary, the lower masts are still guarded by their conductors, from the greatest elevation of the standing masts to the water or to the earth. Mr. Meriam's opinion as to the perfect efficiency of conductors in protecting vessels from lightning, is established and confirmed by the experience of the American navy, where chain conductors are rigidly attended to.* But in the merchant service, where the number of men is very limited, it is impossible to enforce due attention to them, as now constructed and arranged. Without such attention, it is better to have none than such conductors; the vessel has sometimes been struck while preparing to hoist the conductor.

We hope still to protect the lives and property in merchant and packet

* The Navy Department in Washington published this fact about the latter end of February last.

vessels from the disasters to which they are now exposed from lightning. We hope to obviate the prejudices and objections among seafaring men and merchants, by showing that efficient conductors may be attached to the masts of a vessel without requiring time, trouble, or attention from her officers and men.

In the first part of these observations we stated the well known fact, that electricity is conveyed on the surface of metallic conductors, and that the power of such conductors is in proportion to their superficial extent, without regard to their thickness. We now add, that as metals are the best conductors of electricity, it never will fly off from a metallic surface *connected with the sea or earth*, to strike the human body. It never will, it never can, quit a conductor thus *extended to the earth or sea*, to injure any human being. It never can quit a broad metallic surface thus *connected with the earth or sea*, and fly off to a smaller metallic mass or surface.

On such principles as these, Mr. W. Snow Harris, of Plymouth, took out a patent about ten years ago, for a marine conductor made of strips of sheet copper let into the wood, extending from the masthead through the hold, and terminating at the kelson or in the run of the vessel. Mr. Harris was highly respected for his talents, his literary and scientific publications being found in the best literary periodicals in Great Britain. He was a member at the time of the Royal Society, and is now Sir W. Snow Harris. He offered his right to this improvement to the British government for the public service; his offer was considered and discussed by the Board of Admiralty, and finally disapproved by them, because his conductors were made to lead the dreaded lightning into the body of the vessel. Mr. Harris relied, we believe, on his plate conductors to convey the electricity down to the kelson, and on its passing off readily to the ocean by the numerous bolts which connect the kelson to the keel; the water always in the ship's run acting as the conductor between his plates and those numerous bolts. So confident was Mr. Harris in the perfect efficiency of his plan, that he is said to have passed his plate conductor through the magazine of a man-of-war. Some merchantmen use them, and we have never heard of any injury from lightning where they were attached and extended as proposed by him. Mr. Harris recommended one of his plate conductors to each mast, and from various accidents in the British navy, he demonstrates not only the propriety, but necessity for conductors to each mast. He is of opinion that metallic bodies have no particular attraction for the electrical fluid, but that they are its best conductors, and that their metallic points prevent electrical explosions by silently absorbing from the clouds their excess of electricity, and that it cannot leave the best of conductors, his metallic plates, if they be *extended to the sea or earth*. From his valuable collection of facts, it is evident that lightning does not always come on board of a vessel from aloft, but sometimes enters obliquely or laterally from different quarters, striking the spars and masts below the masthead.

He reports one hundred and thirty-three cases of injury from lightning in the British navy during twenty-four years of war, and fifty-five during the same number of years of peace; showing conclusively, that when vessels are laid up in ordinary, with the conductors extended, they are much less subject to injury; but that accidents do occur when only one conductor is given to a ship, and that a chain conductor. Mr. Harris' plan and

proposal having been condemned by the British Admiralty because it conducts the lightning into the very body of the vessel, it has been very generally condemned also in the merchant vessels. The patent was a failure with his original arrangements, and I am told that he has altered that arrangement in conformity to public opinion; but whether he has taken out new patents for his new arrangements, I have not heard. But the necessity for a permanent conductor is as urgent as ever, or more so, in proportion to the greater extension of commerce. We therefore endeavor to obviate the objections to this patent by proposing a different arrangement from his, and an improvement on it.

The surface or circumference of the rods forming the chain conductors for the largest men-of-war being about one inch, we propose that strips of sheathing copper, one and a half inch wide, be let into the royalmast, as in Mr. Harris' patent, extending a little above the truck, and serrated or pointed. That it also extend a little below the heel of the royalmast, and the projection be there also serrated or pointed. This increased number of metallic points, at different elevations, is considered an improvement, but I have not seen the specifications or description of Mr. Harris' conductor. That the junctions of the strips be brazed, and that they be cleaned with sand-paper, so as to be perfectly cleared of roughness and projecting points, especially on the edges, and then tacked to the mast, so as not to be above its surface, or otherwise interfere with the working of the vessel. The capacity of this plate conductor will be one-third greater than that of the largest chain conductor used in the navy, the weight be comparatively a trifle, and the cost much less. For a mast 140 feet high, the weight of the copper conductor would not exceed 25 lbs., and the whole cost be eight or ten dollars. A sheet of 16 inch sheathing copper measures 4 feet long by 14 inches wide, may be cut into 9 strips, = 36 feet. Its weight is from $4\frac{1}{2}$ to 5 lbs., at 27 cents per lb.

36 feet.	Cost of a sheet $1 35
5	05 sheets.
180 feet mast.	$6 75 per mast.

A strip also of sheathing copper, a little wider than that above described, ($1\frac{5}{8}$,) must be let into the topgallantmast from head to heel, projecting a little and pointed at both extremities. So also with the topmast; the width of the strip being also increased $\frac{1}{8}$th of an inch, and inserted into the topmast, so as not to be above its surface, and both polished with sand-paper and serrated at both extremities, that the numerous points may absorb any electricity which might otherwise strike below the masthead; and yet not liable to be caught in the rigging, or prevent those spars, or either of them, from being taken down or put up again when occasion requires it.

From the head of the lower masts of almost all vessels is a stay called a "swifter," descending for the support of the mast on both sides, a little aft of the shrouds, and secured like them to the outer sides of the vessel. As some vessels are not rigged with swifters, a rope may be extended from the tops or crosstrees of the lower masts for the sole purpose of guiding the conductor over the side, in any situation that will be least in the way of the rigging or of the crew. There is no occasion whatever for outriggers in a vessel! Are they ever thought of for houses?

From the heads of the lower masts, I propose that the strips of sheath-

ing copper should descend on one of these swifters, and when they reach the chains to which the swifter is attached, that the width of the copper strip be further increased, so as to render it unquestionably a stronger conductor than the iron chain with which it comes in contact. The circumference of the chain must dictate the width of the copper conductor at this point. If the chain be made of inch iron, the superficies of the two sides will be six inches, and the width of the conductor should be seven inches wide, extending over the chain down to the ship's copper bottom, or to the water. The broadest surface of metal will always be the strongest conductor, and there is no danger of explosion in any part of this connected line of metallic plates from the masthead to the sea.

The iron bands called the "withes," which connect the upper with the lower masts, form the connecting medium between those sections of the conductor which are let into the upper masts or spars. In those vessels which, instead of iron withes, have wooden caps, the connection can be as well made by lining the upper surface of the caps with some of the same sheathing copper, and the continuity of the conductor be perfect and permanent. If either of the upper spars be taken down or carried away, the remainder continue to be perfect conductors, without extra trouble or foresight of any of the crew. If one of the masts should be carried away in a storm, the other, being armed with conductors, would save the persons and property from destruction by lightning.

The owners of these merchant vessels would not sleep quietly if their family residence was not secured from lightning by a permanent conductor, neither ought they to risk the lives and property on board of their ships, without a plate conductor permanently attached to the masts and extending over the side to the water.

This improvement in the outfits of merchant vessels for the preservation of lives and property from injury by lightning, is respectfully submitted to the American merchants, who are among the best educated men in our country. The merchants of Boston, being mostly educated at Cambridge, are familiar with such subjects both in theory and practice, and are particularly requested to take up the subject and set the example. Merchants are the owners of the vessels, and they alone are looked up to for these means of protection—for the protection and promotion of their own interests, as well as the interests of humanity.

The American masters of vessels, particularly of the packets and steamers, calculated for the accommodation of passengers, who are among the most polished, the best educated masters of vessels of any nation on earth, are earnestly entreated to interest themselves, and provide for the protection from lightning of the numerous lives under their care in each voyage.

To the directors of the numerous insurance companies, composed of the best informed merchants, and the most respectable masters of vessels, grown gray in the service, and now retired from the sea, we appeal earnestly that they provide for the safety from lightning of that property which they insure hereafter. They now very properly require a minute inspection of each vessel insured, and if a single rope be deficient, or the stran of a rope parted, they make a difference in the rates of insurance. We conjure them to extend their notice to the provision of conductors in each vessel insured, making it the interest, as well as duty, of ship owners and navigators to equip them with metallic conductors permanently attached.

J. J.

Art. V.—COMMERCIAL CITIES OF EUROPE.

NUMBER IX.

LILLE.—AMIENS.

LILLE—ITS SITUATION—COMMERCE—FLAX—LINEN THREAD—LINENS, DYING, BLEACHING, ETC.—COTTON MANUFACTURES—LACES—WOOL MANUFACTURES—OILS—CHEMICAL PRODUCTS—OTHER MANUFACTURES—TRADE IN COLONIAL PRODUCTS, ETC.—BANK AND MINT.

LILLE, a large fortified city of France, is situated on the frontier line, near Belgium, at a distance of 60 leagues north-east of Paris, and in latitude 50° 38′ 44″ north, longitude 0° 43′ 37″ east from Paris. Its population within the walls is about 72,000.

This city is one of the most important strongholds on the frontier of France. Its citadel, built by Vauban, is considered the finest in Europe.

Commerce. On account of its position on the frontier, Lille carries on an extensive transit commerce in colonial products. Its many and various manufactures also furnish the means of a flourishing trade. The products of its soil and of its manufacturing industry are exported to Holland, Belgium, Germany, Italy, Portugal, Spain, England, the ports of the Mediterranean, the French Islands, and North and South America. The principal manufactures connected with its commerce, are the spinning of flax and cotton, the weaving of linen goods and laces, and the manufacture of oil, beet sugar, and chemical agents.

Flax. Flax is one of the richest products of the agriculture of the neighborhood of Lille. As, however, on account of its exhausting character as a crop, it can only be produced at intervals of several years, the linen factories of the city are obliged to depend for their raw material, in a great measure, upon the foreign article. A large part of the population of the suburbs is supported during the winter months by preparing flax for the factories.

Linen Thread, single. The manufacture of this article at Lille is greatly hindered in its developments by the competition of England. In spite of the duties to be paid, and the cost of transportation, the English are able to make a good profit, by purchasing flax and tow in the French markets, and after spinning them in England, to sell them again in France, to be used in the manufacture of linen goods, &c. This is owing to the perfection of the English machinery, and the fineness of the thread which it produces. The English spin tow with such skill, that often the thread cannot be distinguished from linen, and will command nearly as high a price.

The thread imported from England is used at Lille in the manufacture of ticking, of table and mattress linen, and of twisted thread. In the stuffs, the linen thread is used for the warp and the tow for the woof.

Lille and Roubaix (situated about 2 leagues to the north-east of Lille, and engaged in nearly the same manufactures) consume annually single English thread amounting in value to nearly 6,000,000 francs.

Notwithstanding this dangerous competition, the manufactories of this article at Lille are constantly advancing, both in extent and in the character of their machinery.

Linen Thread, twisted. The manufacture of this article is one of the most ancient and important branches of the industry of Lille. Within the

city it employs 68 factories, whose products are always held in the highest esteem. Their quantity varies but little, though the increased use of cotton in sewing has been somewhat detrimental to the sale of linen thread.

The machinery used in this manufacture is of an inferior kind. Few improvements have been made in it for a long series of years. The amount of single thread annually consumed in these factories is about 1,700,000 kilograms. Two-thirds of this is imported from England. The rest is manufactured by machinery in Lille, or spun by hand in the neighborhood, or imported from Belgium. These factories employ 6,000 workmen, whose pay has usually been from 1 franc to 1 franc 75 centimes per day. Of this number some are children, who earn two or three francs a week.

The spun thread of Lille is sent to Paris, Lyons, Marseilles and Bordeaux. The city has one manufactory of lace thread, whose products are sent to Caen, Bayeux and Nancy. The foreign countries which receive these articles from Lille, are Switzerland, Italy, Spain, Martinique, Gaudaloupe, and the ports of the Mediterranean. Formerly the thread was sent to Paris and Lyons to be dyed. The establishment of a chemical school in Lille, however, has of late enabled the manufacturers to dye their thread before selling or exporting it.

Linens—Dyeing, Bleaching, &c. An extensive trade is carried on at Lille in bleached and raw linens, table and mattress linen, &c., which are manufactured in the city and its neighborhood, and at Armentières, Hazebrouck and Merville. Besides this, a large quantity is imported at Lille from Belgium.

The bleaching establishments in the neighborhood of the city, compete successfully with those of Belgium. The value of the cloth is increased by bleaching from 20 to 40 centimes the aune, according to the width of the cloth and the degree of whiteness given to it, whether ordinary white or milk white.

The raw and half bleached linens are used for bed linen and for clothing.

There are fifteen establishments for dyeing linen at Lille, which employ 200 workmen, and color annually about 80,000 pieces. Of this, 30,000 pieces are intended for blouses and other articles of dress, in the making of which 6,000 women are employed in and about the city.

A large quantity of table linen is manufactured at Lille, and in the neighboring towns of Armentières and Merville. At Merville, where the best qualities are produced, 200 weavers are employed. The damasked linen of Merville is in high esteem.

Since the close of the European wars, the trade of Lille in linens has been greatly extended. The city has more than 120 houses in the trade, most of which carry on a large business. The capital employed is about 20,000,000 francs. The goods are sent to every part of France, to Spain, Italy, and North and South America.

Cotton Manufactures. Lille was the cradle of the cotton spinning of France. Previous to 1791, nearly all the cotton used in the factories of the city and its neighborhood was carded and spun by hand. In that year an Englishman passing through the place offered the municipality a carding and spinning machine, similar to those used in England. This machine was purchased by the authorities, and after considerable commotion

among the workmen, copies were made and put in use. From that period this manufacture developed rapidly.

At present the number of factories engaged in cotton spinning is 44. These employ 3,800 laborers. The fixed capital invested in them is about 7,000,000 francs. Their annual product is nearly 8,000,000 francs.

Constant improvements are made at Lille in the manufacture of single cotton thread. Since 1829, the spinning mills have produced twisted cotton suitable for the manufacture of laces, &c. The sewing cotton called *fil d'Ecosse* has of late been manufactured at Lille with great success. The article produced is superior to that made at Paris.

The cottons of Bahia, Georgia, Louisiana and Cayenne, are spun to be used as the warp; those of Pernambuco and Jumelle, as the woof of the woven fabric. The cotton thread manufactured at Lille is nearly all sent into the interior of France.

The weaving of cotton is of less importance than the spinning in the industry of this city. However, considerable quantities of calicoes, Kerseys, dimity, and ticking, are manufactured in the neighborhood. Most of these articles are sent into Belgium, and to the French colonies.

At Roubaix, about two leagues from Lille, these manufactures are carried on extensively.

Laces. Lille is the first city of France in the manufacture of laces of every kind. These are made both by machinery and by hand, and employ directly nearly 6,000 persons. In 1820, the number of persons employed was upwards of 16,000.

The products of these manufactures are sent to Paris, Lyons, and the south of France, and to England, Spain and America. The commerce in laces employs a capital at Lille of about 3,000,000 francs.

Wool Manufactures. The manufacture of wool was formerly of great importance at Lille. Of late, however, it has much declined. The articles manufactured are yarn, blankets, hose, &c. There are many wool spinning mills in the neighboring towns.

Oils. The manufacture of oil from grains is carried on very extensively at Lille. Three hundred wind-mills, besides 8 moved by steam and 5 by water, are kept in constant activity. The neighboring country does not produce enough oleaginous grain for the supply of this manufacture. A large part of the raw material is imported from Riga and Hamburgh.

Chemical Products. The environs of the city abound in manufactories of chemical agents. At Loos, 1,000,000 kilograms of sulphuric acid are annually produced, a part of which however is again consumed in the same factory, in the manufacture of muriatic acid and sulphate of soda. Ten factories, with 272 workmen, are employed near the city in the manufacture of white lead of the first quality. The amount annually produced is valued at 2,500,000 francs.

Other Manufactures. Great quantities of beet sugar have been made at Lille. In 1837, the annual product was valued at 9,000,000 francs.

The large factories of the city support numerous machine shops, foundries of various metals, bleaching yards, card factories, dye factories, &c.

Besides these, Lille has 16 breweries, 6 distilleries, 10 mead factories, 14 salt refineries, 5 soap factories, 9 tanneries, 10 starch factories, &c. &c.

The number of steam engines used in the city and its environs is 207.

Trade in Colonial Products, &c. The colonial products which arrive at Dunkirk pass through the hands of the merchants of Lille, and are sent by them into all the surrounding country.

Lille also supplies the neighboring departments with olive oil, spices, brandy, Bordeaux wine, wool, potash, dye woods, wax, tar and pitch, and various other articles.

Bank and Mint. The Bank of Lille was established in 1836, by royal decree, with a capital of 2,000,000 francs.

A Mint was established in the city in 1685. Between 1818 and 1834, the value of the gold coined there was 57,000,000 francs, that of the silver, 396,000,000 francs.

AMIENS.

AMIENS—COMMERCE—MANUFACTURES—WOOL SPINNING—ALEPINES—COTTON SPINNING—COTTON VELVET—WOOLLEN HOSIERY—VARIOUS MANUFACTURES—FAIRS.

Amiens has for a long period held a prominent place among the commercial and manufacturing cities of France, and although for some years it has been less flourishing than of old, it is still a place of great importance. It lies directly to the north of Paris, and is about 28 leagues distant from that city. Its population is 45,000.

Commerce. Amiens lies on the river Somme, which affords it an easy communication with the English Channel, and through that with the northern ports of Europe. Its trade is not confined to the products of its manufactures, but comprises also the dyes, spices and drugs of Marseilles, colonial products coming from Bayonne, Bordeaux, Cette, La Rochelle, Nantes and Havre, together with the articles of merchandise which France receives from Spain, Portugal, Holland, England, and the north of Europe.

Manufactures. The manufacturing industry of Amiens and its environs, consists of wool spinning, the weaving of *alepines*, or stuffs of wool and silk, the spinning and weaving of cotton, and the weaving of hose.

Wool Spinning. Till about 1823, wool was spun at this city only by the spinning wheel. At that time machinery was introduced, and its use was rapidly extended, in order to supply the wants of the manufacturers of *alepines*. The number of looms at present employed in wool spinning is about 360, divided among 42 spinning mills.

The products of this industry are about 800,000,000 livres of yarn, numbered from 25 to 60—the numbers between 25 and 36 being most in demand. The active capital engaged is about 5,000,000 francs. Two thousand persons are employed in the spinning mills.

Alepines. The manufacture of *alepines* was begun at Amiens about fifty years ago, and now that place produces annually 36,000 pieces, valued at 18,000,000 francs. This manufacture employs 6,000 workmen, and is second in importance only to the cotton manufacture. Amiens has almost the monopoly of the manufacture of merino alepines.

Cotton Spinning. There are thirty cotton spinning mills at Amiens, moved mostly by water or horse power. These produce about 600,000 kilograms of spun cotton, between the numbers of 25 and 60. The number of workmen employed is from 12 to 15,000. It is only here that the woof of cotton velvet is well spun.

Cotton Velvet. The manufacture of cotton velvet at Amiens is very extensive, and of great importance to the commerce of the city. It origina-

ted about the middle of the last century. The attempts made at that time, though they met with little success, were followed up with perseverance. English workmen were obtained from Manchester, and great attention was given to the improvement of the art. In 1788, the first mull-jenny made in France was constructed at Amiens. Up to that time, hand looms alone had been used.

With the aid of this improvement, the manufacture of velvet advanced with great rapidity. Large factories were erected, and Amiens acquired great importance as a manufacturing city. This place, however, has never rivaled Manchester, the great velvet manufactory of England, neither in the amount of its products nor the perfection of its machinery. The English machines are more economical. Every loom is moved by machinery, and each loom usually weaves two pieces at once.

In 1814 the products of the velvet factories of Amiens amounted to from 120,000 to 140,000 pieces of 52 or 53 aunes. Since then it has fallen to 70,000 or 80,000 pieces. The decline is chiefly owing to the change of fashion which has substituted cloth for velvet in the dress of gentlemen. Formerly this article was exported to Germany, Belgium, Switzerland, Italy, and Spain, but at present little is sent abroad, except to Spain, which receives about a fifth of the whole quantity manufactured.

The velvets intended for Spain are sent to Bayonne on the Bay of Biscay, or to Perpignan on the Gulf of Lyons, where they are purchased by the Spanish merchants, who smuggle them across the frontier. It is thus that Catalonia, Navarre, Arragon and Biscay are provided with this article. Those parts of Spain lying near Portugal, or upon the Atlantic coast, are supplied by the English.

About 1,800 workmen are employed in weaving velvet and other cotton fabrics. The fixed capital invested in buildings, machinery, &c., is estimated at 12,000,000 francs, the active capital at about 4,000,000 francs.

Woollen Hosiery. The manufacture of woollen hose has been carried on for many years in the neighborhood of Amiens. This manufacture consumes about 800,000 kilograms of wool yearly. Two-thirds of this is from Holland, the rest is French. The French wool has not the length nor the natural whiteness of the Dutch or English, and can never wholly supersede them in manufacture.

The value of the wool annually consumed in this manufacture is about 8,000,000 francs. The annual product is valued at 17,000,000 or 18,000,000. The active capital employed in the export and sale of the article is about 8,000,000 francs.

About 10,000 women are employed in spinning the wool, 15,000 weavers are occupied in the factories, and 20,000 persons of both sexes and all ages are engaged in sewing, dyeing, and other occupations incidental to the manufacture. Of the products, about one-fifth is sent abroad.

Various Manufactures. Besides the articles we have already mentioned, Amiens produces woollen plaids in great quantity, swanskin, prunella, turkey satin, and goat's hair stuffs for underclothes. It has also carpet factories carried on after the plan of the English, as well as factories of the oil of grains, vitriol, soft soap, and a large number of dyeing and bleaching establishments.

Altogether, the factories of this city produce about 180,000 pieces of cloth of all kinds, valued at about 40,000,000 francs, and requiring an

active capital of 24,000,000. The number of merchants dealing in the products of the factories is about 150.

Fairs. Amiens has two fairs during the year, one on the 25th June, which continues fifteen days, and one on the 11th November.

Art. VI.—COMMERCIAL CODE OF SPAIN.

NUMBER VII.

We continue our translations from the *Codigo de Comercio* of Spain. Our present number treats of Maritime Insurance, (*Maritimo Seguro.*)

CONCERNING THE FORM OF A CONTRACT.

Art. 840. The contract of insurance must appear by a public or private writing, in order to be valid in law.

The different forms of its celebration, and the respective effects of each, are the same as those which relate to the contract of bottomry, and these are, that such contracts can be celebrated—

First. By a public instrument with the solemnities of law.

Second. By a policy signed by the parties, with the intervention of a ship-broker, (*corredor.*)

Third. By a private document between the contracting parties.

Contracts of insurance, which may appear by a public instrument, carry with them ready execution. Such contracts shall have the same effect when made with the intervention of the ship-broker or notary.

The policy of the demandant can be proved by the registration of the broker, whenever this is found, with all the formalities prescribed in Art. 95 of this code.

Being privately celebrated between the contracting parties, the contract shall not be executive, unless the authenticity of the signatures appears by judicial examination of those who made them, or in some other sufficient form.

841. In whatever manner the contract of insurance is drawn up, it ought to contain all the following circumstances:—

First. The date, with the expression of the hour in which it was signed.

Second. The names and domicils of the insured and underwriters.

Third. Whether the insured has his own goods underwritten, or acts by agency on the account of another party.

Fourth. The names and domicils of the owners of the things underwritten, in case of the goods being underwritten by commission.

Fifth. The name, tonnage, flag, matriculation, armament, and crew, of the vessel in which the transportation of the things underwritten is to be made.

Sixth. The name and domicil of the captain of the vessel which is to transport the goods.

Seventh. The port or roadstead in which the merchandise has been or is to be shipped.

Eighth. The port whence the vessel is to sail or had sailed.

Ninth. The ports or roadstead in which the vessel ought to load or discharge her cargo, or for any other reason, to stop at or to enter.

Tenth. The nature, quality, value, and objects insured.

Eleventh. The marks and numbers of the goods insured, if they have any.

Twelfth. The times in which risks are to begin and end.

Thirteenth. The amount underwritten or insured.

Fourteenth. The premium agreed upon for the insurance, and the place, time, and mode of payment.

Fifteenth. The amount of premium which corresponds to the outward and return voyage, if the insurance is made for an entire voyage and to return.

Sixteenth. The obligations of the underwriters to pay the damage which may happen to the effects insured.

Seventeenth. The time, place, and form in which the payment of losses is to be made.

Eighteenth. The submission of the parties to the judgment of arbitrators in case of dispute, should the parties have so agreed, and every other lawful condition which the parties may have agreed upon in the contract of insurance.

842. Spanish consular agents shall authenticate contracts of insurance which are made in places of their respective residences always, when any one of the parties is a Spanish citizen, and the policies which they authenticate shall have equal force as though they had been made by the intervention of a ship-broker (*corredor*) in Spain.

843. When there are many underwriters, and they do not all sign the policy at the same time, each one shall express before his signature, the date on which he makes it.

844. One and the same policy can comprehend different insurances and premiums.

845. The vessel and cargo can be insured in the same policy, but the amounts are to be distinguished which are insured upon each, without which the insurance shall be ineffectual.

846. When insurance of merchandise is made, a specific designation of it may be omitted, and also of the vessel in which it may be transported; but in case of misfortune, when these circumstances do not appear, the insured must prove, besides the loss of the vessel, and her sailing from the port of loading, the embarkation of the effects lost, and their true value on account of the party procuring the insurance.

847. When the obligation of the insurance of the goods shall extend not only in favor of the person in whose name the insurance is made, but also to his order, the policy of insurance shall be *endorsable*.

CONCERNING THINGS WHICH CAN BE INSURED, AND THE ENUMERATION OF THEM.

848. The following articles can be the object of a maritime insurance:—

First. The hull and keel of a vessel.

Second. Her sails and apparel.

Third. Her armaments.

Fourth. Her provisions and stores.

Fifth. The amounts lent on bottomry.

Sixth. The liberty of the passengers or persons sailing in the vessel.

Seventh. All commercial effects subject to the risk of navigation, whose value can be reduced to final amount.

849. The insurance can be made upon all or part of the objects above expressed, together or separately—in time of peace or war—before the commencement of the voyage or pending it—for the outward and the return voyage, or for one or both—and also for the whole time of the voyage, or for a limited period of time.

850. The expressing generally that the vessel is insured, all the appurtenances annexed to her are understood to be comprehended in the insurance; but not her cargo, although it may belong to the same NAVIERO or ship's husband, unless express mention of the cargo is made in the contract.

851. In case of insurance of the liberties of the persons navigating in the vessel, there shall be expressed—

First. The name, nativity, domicil, age, and profession, and signs of the person mentioned.

Second. The name and matriculation of the vessel in which he embarks.

Third. The name of the captain of the vessel.

Fourth. The port of departure.

Fifth. The port of destination.

Sixth. The amount agreed upon for a ransom, and the expenses of a return home to Spain.

Seventh. The name and domicil of the person to be exchanged, with the negotiations of the ransom.

Eighth. The time in which the negotiations are to be made, and the indemnification which is to be made in case of the negotiation not being verified.

852. The underwriter can reinsure by others the effects which he may have insured for a greater or less premium than he contracted for, and the insured can also insure the costs of the insurance and the risk which there may be for the recovery of the first insurance from the underwriters.

853. On the things which the captain or shipper may procure an insurance, which are embarked with the captain's or shipper's own effects, there shall be left ten per cent at the risk of the insured, and the insurance shall only have effect for nine-tenths of the just value of the things insured.

854. There shall not be underwritten upon vessels more than four-fifths of their value, deducting the loans taken on bottomry upon them.

855. The value of the merchandise underwritten ought to be fixed, according to what it may have, in the place where it is shipped.

856. The subscription of the policy raises the legal presumption that the underwriters admit as just the valuation made in it.

But if there has been fraud on the part of the insured in the valuation of the effects of the insurance, the underwriters shall be allowed to prove the fraud by the survey and the just valuation of the effects, or by the invoices or other legal means of proof; and the fraud resulting being proved, the responsibility of the underwriters shall be reduced to the just value which the effects may have.

857. When by error, and not by the fraud of the insured, an exaggerated estimate may have been given to the effects of the insurance, this estimate shall be reduced to the amount of the legitimate value of such effects

by agreement of the parties; or, in default of it, by arbitration; and according to the result shall be the liabilities of the underwriters and the obligations of the insured, there being allowed to these one-half per cent upon the amount which may result as excess.

This reclamation shall not take effect either on the part of the underwriters nor on that of the insured, after notice has been received of the situation and loss of the vessel.

858. The valuations made in foreign money shall be converted into the exchange or equivalent of the kingdom, according to the course or rate which it had on the day in which the policy was signed.

859. The value of the things insured not being fixed at the time of the making of the contract, it shall be regulated by the invoices of consignation, or, in want them, by the appraisement of ship-brokers, (*corredors,*) who shall take as a basis for their valuation the prices which the effects insured were worth in the port where they were shipped, adding the duties and expenses caused until they were put on board.

860. The insurance falling upon RETURNS from a country where commerce is not carried on except by permutations or exchange of commodities, and the value of the things insured not being fixed in the policy, it shall be regulated by that which they had in the port of embarkation, adding all the subsequent expenses.

CONCERNING THE OBLIGATIONS WHICH EXIST BETWEEN THE INSURED AND THE UNDERWRITERS.

861. On account and at the risk of the underwriter, there shall run all the losses and damages that may happen to the things insured by stranding and the working of the vessel, by storms, by shipwreck, by collision, by a forced deviation of the ship or vessel, by jettison, by fire, by capture, by plunder, by declaration of war, by embargo, by detention of princes, by reprisals, and generally by all the accidents and perils of the seas.

The parties shall stipulate the exceptions which they may deem convenient, making, necessarily, mention of them, without which requisite they shall have no effect.

862. The damages which may happen on account of any of the following causes are not chargeable upon any of the underwriters:—

First. A voluntary change of the route of the voyage or the vessel without the consent of the underwriters.

Second. A spontaneous separation from a convoy, there being a stipulation to go in company with it.

Third. A prolongation of a voyage to a port more remote than that designated in the insurance.

Also, arbitrary dispositions, and contrary to the policy of affreightment or to the knowledge of the *naviero* shippers and freighters.

Fourth. The barratry of the captain or crew, there being no express agreement to the contrary.

Fifth. *Waste,* deterioration, leakage, and losses upon the cargo which may proceed from the inherent defect of the things insured, when they may not have been comprehended in the policy by a special clause.

863. In whatever cases the preceding article forms an exception to the liability of the underwriters, they shall gain the premium whenever the objects insured have begun to run the risk.

864. The underwriters shall not respond to the damages which may

happen to a vessel for not carrying the regular documents which the maritime ordinances prescribe, but in such cases the underwriters are responsible for the damages which may occur to the cargo insured.

865. The underwriters are not bound to satisfy the expenses of pilotage and light-house dues, nor the duties imposed upon the vessel or her cargo.

866. The cargo outward and homeward being insured, and bringing in no return, or bringing in less than two-thirds of her cargo, the underwriters shall only receive two-thirds of her premium, corresponding to the return cargo, unless the contrary may have been stipulated.

867. The cargo of the vessel being insured by separate parcels and distinct underwriters, without expressing in detail the objects corresponding to each insurance, all the underwriters shall satisfy *pro rata* the losses as may occur in the cargo or in any portion of it.

868. Different embarkations being designated to take the goods insured on board, it shall be at the will of the insured to distribute them amongst such embarkations as the insured may think expedient, and as it may accommodate the insured; or he may reduce them to one embarkation, without there being any alteration in the responsibilities of the underwriters for this cause alone.

869. The insurance of a cargo being contracted, with the designation of the vessels, and a particular expression of the amount insured upon each, if the cargo shall be reduced for a less number of vessels than those pointed out, the responsibility of the underwriters shall be reduced to the amounts insured upon the vessels which may receive the cargo, and they shall not be chargeable with the losses which may occur upon the remainder; but the underwriters shall have a right, in this case, to the premiums for the amounts insured on such remainder whose contracts shall be held null, there being allowed to the underwriters one-half per cent upon their amount.

870. The cargo being transferred to another vessel after the voyage is commenced, the one designated in the policy having become useless or unseaworthy, the risks shall run on the account of the underwriters, even when the vessel to which the cargo is transferred shall be of a different tonnage and flag.

If the unseaworthiness of the vessel shall occur before sailing from the port of departure, the underwriters shall have the option to continue the insurance or not, allowing for the averages which may occur.

871. The time not being fixed in the policy in which the risks are to run, on the account of the underwriters, the dispositions mentioned in Article 835 of this code shall be observed, which are, that the risks shall commence, in respect to the vessel and its aggregates, from the moment in which she makes sail to that of her anchoring and mooring in the port of her destination; and, with respect to the cargo, the risks shall run from the time of loading the vessel in the port where the voyage commences until the vessel is discharged in the port of her consignation.

872. When a limited time is fixed in the policy of insurance, the responsibility of the underwriters shall end, the term having run out, even when the risks of the things insured may be pending, but upon whose results the insured can make new contracts.

873. The involuntary delay of a vessel in the port of departure does not fall to the prejudice of the insured, and it shall be understood that the term designated in the policy is prorogued on the effects of the insurance for the whole time that the delay may be prolonged.

874. A reduction of the premium of insurance cannot be exacted even when the vessel terminates her voyage, or the cargo is delivered at a port nearer than that designated in the contract.

875. A variation which may be made in a route or voyage of a vessel, by the accident of SUPERIOR FORCE, to save the vessel or her cargo, shall not discharge the underwriters from their responsibilities.

876. The delays or stoppages which may be made, by necessity, for the conservation of the vessel and cargo, are understood to be comprehended in the insurance, although they may not be expressed in the contract when they are not expressly excluded.

877. The insured is bound to communicate to the underwriters all the information which he may receive concerning the damages or losses which may happen to the things insured.

878. The captain who may make insurance on the effects loaded on his account or on commission shall prove, in case of misfortune, to the underwriters the purchase of the effects insured by the bills of sale or invoices of the sellers, and also their embarkation and transportation in the vessel by a certificate of the Spanish consul; or, when there is none, by the civil authority of the port where he loads them, and by documents of the voyage or of the expedition, and by the clearances at the custom-house.

This obligation shall extend to every person insured who may sail with his own merchandise.

879. If it should be stipulated that the premium of insurance shall be augmented in case of war happening, and the quota of this increase should not have been fixed, it shall be regulated by skillful persons named by the parties, consideration being had to the risks incurred, and to the stipulations in the policy of insurance.

880. A gratuitous restitution of the vessel or cargo made by the captors to her captain, it shall fall to the benefit of the respective owners, without any obligation on the part of the underwriters to pay the amounts which they have underwritten.

881. When a time is not fixed in a policy in which the underwriters ought to make payment on the things insured, or the damages which may be to their account, they shall be bound to verify it in ten days following the legitimate reclamation of the insured.

882. Every reclamation proceeding from the contract of insurance ought to be accompanied by documents which prove the voyage of the vessel, the embarkation of the effects insured, the contract of insurance, and the loss of the things insured.

These documents shall be communicated, in case of judicial controversy, to the underwriters, that, on view of them, they may resolve either to make payment of the insurance or oppose it.

883. The underwriters may contradict the facts on which the insured sustains his demand, and proof to the contrary shall be allowed them without prejudice to the payments of the amount underwritten, which ought to be verified or paid without delay, always when the policy of insurance is executive; and the demandant shall give sufficient surety to respond in case of the restitution of the amount received.

884. An underwriter paying the amount insured, he is substituted in the place of the insured for all the rights and actions which belong to him over and above those which, by fraud or defaults, caused the loss of the effects which the underwriter insured. A. N.

Art. VII.—COMMERCIAL FACILITIES OF THE AMERICAN CONTINENTS:

WITH REFERENCE TO THE GEOGRAPHICAL DIVISION OF NORTH AND SOUTH AMERICA, THEIR SOIL, CLIMATE, PRODUCTIONS, AND NATURAL EXCHANGES, OR COMMERCIAL INTERCOURSE.

First, we start on the parallel of 49° north latitude, south of which and east of the Rocky Mountain range, all the waters empty into the Gulf of Mexico or the Atlantic, and west of said range all the waters empty into the Pacific, forming a grand division or separation from said 49th parallel to Cape Horn.

Said division, on the 49th parallel, is on the 114th meridian of longitude, 10° east of the Pacific, and 54° west of the Atlantic; said range or division runs in a south-easterly direction to the parallel of 32° on the 106th meridian, 10° east of the Pacific, and 26° west of the Atlantic. Now all this immense country east of the division to the Atlantic, and north of the parallel of 38°, is expressly calculated and ordered by nature for the production of food for man—breadstuffs and meat; while all south is more particularly calculated for the production of cotton, rice, tobacco and hemp. West of the division to the Pacific, the climate being more mild all south of 40° latitude, where there are streams suitable to supply irrigation, it is calculated for the production of cotton, rice, tobacco and hemp; while all north of 40° is calculated for breadstuffs and meat, with the ocean fishery, more valuable than that of all the world beside. The division continues its southeasterly course, till it approaches very near the Pacific, on the parallel of about 16°, and so on to Panama, and thence to the parallel of 8° south latitude, on the meridian of 78½°; one degree east from the Pacific, and 40° west from the Atlantic, continuing the same to the parallel of 38° south latitude, where it is 2° east from the Pacific, and 14° west from the Atlantic; then continuing the same, but narrowing down on the eastern side to Cape Horn, south latitude 56° about, and west longitude 67°.

Now it will be seen that the northern and eastern side of this division is capable of being made to produce food for all the world; and that the southern and eastern part, including the Columbian Archipelago, or West Indies, is also capable of being made to produce tropical and other products, such as sugar, molasses, coffee, indigo, cotton, hemp, tobacco, &c., for all the world. Now these two sections are dependent on each other for an exchange of products, and Europe dependent on both for an exchange for her manufactures; and the streams which drain all this vast country, emptying into the Atlantic, directing the courses and forming the means of transit for these exchanges. And it will be seen by the western or Pacific division, from the Cape to north latitude 16°, that owing to periodical droughts, the worst of climates, want of means to irrigate, &c., there is but a small amount of land suited to cultivation, and can sustain but a small amount of population; but from latitude 16° to 25° are more land suited to cultivation; thence to latitude 35° the lands are poor, and will not produce without irrigation; to 38° better, but requires irrigation; from 38° to 49° is a tract suited to sustaining a large population. Of this side of the division, the northern portion can only be supplied, for the deficit in tropical products of the southern half, directly from the islands in the Pacific and Indian Ocean, and from Japan and China, more conveni-

ent and less expense of transit than from the eastern side. Thus it must be evident to all that the natural products of these two sides of the division cannot be exchanged, because each, including the islands of the Pacific and Indian Ocean, produce the same. So as the roof of a house divides the waters which fall on it from the heavens, and guides them equally to the two cisterns on either side, are these two continents and the world divided, and as soon might the one cistern propose an equal exchange of its waters with the other, as to expect an exchange of the products of the two sides of these continents. Europe also could be supplied from the eastern cheaper than the western side, all except the products of the fishery. But if the western side can find markets in Asia, Japan, China, the islands, &c., giving a return sufficient, then its population can purchase the manufactures of the eastern side and of Europe; but this must always be limited, and require but limited intercourse, because commerce cannot be carried on to any considerable extent except by exchanges of the commodities, the products of each. The present commerce of all the Pacific coast is limited, and the greater amount of which may now be considered as the commerce of the Atlantic slope; the merchandise is taken to ports on the Pacific, and there transported upon mules over the mountains to the Atlantic side, and minerals returned in the same manner. This is done for two objects, to save duties and transit expenses; but so soon as steam is applied to navigate the many streams which reach from the Atlantic to within a few miles of the Pacific, the present commerce must diminish, and the intercourse also; for it is clear that all that very narrow space between the dividing range from the Cape up to even 32° north latitude, can never produce more than sufficient to supply the wants of its own population, and the products of from 32° to 49° north latitude, with the exception of the fishery, will be food for man; and it is clear there can be nothing to be brought this side all from the Cape to 49° north latitude.

Thus, then, nature has so divided and separated these two slopes that they cannot exchange products, can therefore have but little intercourse, and receive no benefit from each other; on the contrary, their interests would be rival and conflicting. The western slope will command *that* fishery, where it must very shortly be transferred; they will command the commerce of Japan, China, Polynesia, and all Asia. The tide of emigration now from Europe to the Atlantic side, which employs so many ships and men, and pays a heavy amount of transit all through to their settlement in the country, would be changed to from Europe direct to the Pacific slope. The two hundred dollars which the emigrant now pays for 160 acres of land, would more than pay his passage direct to the Pacific side, where he would find land without price, and save besides the *now* heavy expenses from the time of his landing to his destined home. And the ships taking out the emigrants could take a return cargo of oil, &c., from Vancouver's Island to England as colonial produce. If these views are correct, and I do not see how they can be controverted, being founded on the only laws (an exchange of products) which can ever regulate intercourse and commerce, there must be two separate, distinct nations upon this continent; but if we proceed at once to build the proposed railroad from Lake Michigan to the Pacific, it would attract and draw to it the emigrants from Europe, because it would give a reward to labor sufficient to produce comforts and plenty; and when completed, it would bind the

two sections together in mutual interests and benefits, each participating in the local advantages and position of the other, and secure to both the command, control, and the transit of all the commerce with Asia, now so important to Europe, England particularly, because it is an exchange of their manufactures for teas, spices, coffee, indigo, &c. Without the road, (and that cannot be accomplished if it is not commenced without delay,) the result seems certain and unavoidable, and the blood and treasure which California has cost us will have been spent in vain, and all that we now spend for governments for California and Oregon is worse than so much scattered to the winds, because it builds up a rival.

Art. VIII.—MASSACHUSETTS HUMANE SOCIETY—LIFE-BOATS.

As the following letter, from an eminent merchant of Boston, refers to a subject of general interest to merchants and underwriters in all our commercial cities, we cheerfully comply with the request of R. B. Forbes, Esq., the author, by giving it a place in the pages of our journal without further comment. It tells its own story, and its contents are well worthy of the most careful consideration.

Boston, *November 10th*, 1848.

To Freeman Hunt, Esq., *Editor of the Merchants' Magazine.*

Dear Sir:—As your valuable work appears to be open to publication on subjects interesting to those engaged in commerce, I make no apology for troubling you with some remarks on the means now in use, and the means to be adopted, to save life on our Atlantic coast.

The Massachusetts Humane Society was instituted at 1786, and incorporated in 1791; the "end and design," as expressed in the act, being—

"For the recovery of persons who meet with such accidents as to produce in them the appearance of death; and for promoting the cause of humanity, by pursuing such means, from time to time, as shall have for their object the preservation of human life and the alleviation of its miseries."

I have the pleasure herewith to send you a pamphlet containing a history of the Society. You will observe thereby that under its auspices, life-boats and huts, for the protection of shipwrecked mariners, have been provided at various points on the coast in this vicinity, and that the efforts of the Society have been eminently successful in ameliorating suffering, and in rewarding, by medals or grants of money, all those coming under the notice of the Trustees who have been instrumental in rescuing mariners or others from peril by water.

The usefulness of the Society has been somewhat limited, owing to a want of means to carry out the views of the Trustees. Recently, however, the Secretary of the Treasury has granted a sum of money, appropriated by Congress in 1847, in the Light-house Bill for the benevolent objects of the Society; and the Trustees intend forthwith to increase the means of saving life in this vicinity, by establishing further life-boats and other boats, rockets, etc. etc.

In the bill for light-houses passed by the last Congress, a further sum of ten thousand dollars was placed under the authority of the Secretary of the Treasury, for the purpose of providing means, on the coast of New Jersey, for saving life. It has long been a matter of surprise to me, that a great commercial community like that of the city of New York, with its dangerous entrance peculiarly exposed to the action of gales from north-east to south-east, should so long have permitted the subject of preserving the lives of shipwrecked mariners to have occupied so little place in their minds. If half the stories we hear are true, the

wrecked sailor has to contend not only with the elements on the coasts of New Jersey and Long Island, but meets, on landing, no sympathy from the inhabitants. I trust this is about to be rectified, and that the government will be induced annually to extend its patronage to humane societies, than which no better use can be found for a little of the money so largely contributed by merchants and sailors. With a view of offering the little experience I have gained to the public, and to call forth discussion on life-preserving apparatus, I will give you my ideas on the subject.

The present life-boats of the MASSACHUSETTS HUMANE SOCIETY are constructed something like those of Henry Greathead, of South Shields, with copper air-tight boxes at the ends, and in the sides near the bilges, with plug-holes to let out the water, when the boat ships a sea. They have answered the intended purpose very well in locations where they can be manned in a sheltered place, and thence pulled to the scene of disaster, but they are too heavy to launch from an exposed beach, or to transport from place to place without a carriage and horses—not always to be had when most wanted.

It is a very difficult matter to construct a life-boat which shall answer all the ends desired. She must be large enough to carry half a dozen people besides her crew; she must be flat amidships in order to land on a beach tolerably upright and to give her buoyancy; she must be sharp at the ends in order to pull well; she must have great shear in order to be drier than a straight boat, and to accommodate the steer oar; she must have beam enough to pull "double bank;" she must be light enough to transport on land, and pull in the water easily; she must be strong enough to stand some hard knocks; and she must not cost too much money. The question then arises—How shall all these properties be best combined? for we cannot give up any one of them in a useful life-boat. I have no hesitation in saying that the metal boat is likely to combine all the properties named, provided she can be constructed of proper model; and, in addition to the qualities named, she will remain tight after being long housed. I must say, however, that of all the metal boats I have seen, not one is of suitable model to command confidence in a sea way.

Whether the life-boat is made of wood or metal, I am fully of opinion that the best plan to make her buoyant and to prevent her capsizing, is to have, first, *the right shape*, and, to make her safer, particularly in case of shipping water, she should have a strong inflated bag or cylinder under a deck at each end, confined loosely by a bulkhead or grating, and coming well up to the gunwale; she should have two cylinders twelve or fifteen feet long and eight or ten inches diameter, under the thwarts, close to the side of the boat, and two more outside as high up as the oars will permit them to be fastened; and if these are found not to be sufficient to buoy up a stoven boat and crew so that she can still pull at some inconvenience, two other cylinders may be secured to the upper part of the thwarts close out to the side, especially for double-bank boats; for surf-boats, pulling single, or with long oars, the cylinders or inflated buoys may be placed amidships, and so be out of the way of the men. Experience will best tell us where to put the india-rubber canvass cylinders, but there is no doubt in my mind that they are the proper thing to use instead of metal boxes; the outside cylinders or buoys will be found eminently useful as fenders to protect the boat from being stove, and also as buoys to keep the boat from being upset by the stroke of a sea, or by too many getting suddenly to one side.

After all, the best life-boat and crew can do little in the height of a gale on a surf-bound and rocky coast, and it may be truly said that the best life-boat, though well adapted to taking a number of people off a wreck after the brunt of the storm is past, is next to useless for the purpose of establishing a communication in a storm with a wreck, as compared with a regular surf-boat; a common dory may do this when the best life-boat cannot.

At each exposed location on the coast, the hardy inhabitants, generally engaged in fishing, have peculiar notions as to the best vehicle to pull to sea in from a beach in rough water. Call this prejudice, or call it what you will, it is best to consult these men, on whom you are to depend to man the boats in time of peril.

The Nantucket people would probably say, "Give me a whale-boat and a good crew to pull to windward and do service," yet every one knows that a whale-boat, steered by an oar as she must be in a surf, cannot take on board another man without his being much in the way; and every man conversant with landing in a surf knows that a shorter, flatter and wider boat is better for that purpose than a whale-boat.

At every life-boat station there should be a boat of smaller size and lighter material, to be fitted with the inflated "fixings," to be used to run a line or to communicate with the wreck. Such a boat might rescue, one by one, a crew from a wreck, when the larger boat could not; and, to have the system complete, (so far as boats are concerned,) a still smaller boat would at times be very useful to tow off to windward of a wreck by the larger boat, and to be dropped down to the wreck by a line. Two or three instances have been reported to our Society in which a small canoe, or punt, has been used in this way successfully, when the large boat could not or did not dare go alongside the wreck. In addition to these means of saving life, every exposed location should be provided with some apparatus for throwing a line. It often happens that a vessel is cast on shore and there holds together for hours when no boat can go to her at all, or with any great hope of succeeding in the attempt, and yet so near the rocks, or the beach, that a line may be thrown to her, and by that a hawser may be got on shore, and so, by rigging a tub, many lives might be saved which otherwise might be lost. Take the case, for instance, of the Henry Clay; she was on shore in a position tolerably safe in the weather that she had at the time, and there was no imminent danger to life while the weather remained as it was, but there was danger in getting a boat to and from the shore, and we know that several lives were lost in the attempt. I take it for granted that she could have thrown a line with one of Carte's rockets, on shore, or near enough to be got on shore, by the men on the beach; and I am sure that there are many cases where a rocket, properly constructed, may carry a line to a stranded ship when a boat cannot. I have imported some for the Massachusetts Humane Society, and found them to answer so well that I shall try to have them placed at all our life-boat stations. Many people are not aware that it is difficult to get a line from a stranded ship to a beach, through the surf, by a buoy; the undertow takes the bight of the line back at each retreating wave; and again, lines and buoys are not always at the command of half-frozen, half-drowned men, hanging to a wreck. Every packet-ship should have a dozen of Carte's rockets on board, with a good line or two. They would not only be useful in case of being cast on shore, but also often at sea, in case of falling in with a wreck in rough weather, when a line may be thrown to her and made fast, while a good boat with two or three men could be hauled up to her by it, or a larger line be hauled to the ship. In short, the Carte's rocket, or some similar apparatus, need only to be seen and tried to be appreciated.

I trust that these remarks, hastily thrown together, will call forth discussion and investigation on the subject of life-preserving apparatus, and that the parties who have the disbursing of the ten thousand dollars appropriated in the Light-house Bill of 1848, will entertain the suggestions I make as coming from one not entirely "green" in nautical matters, though ready to learn something further of Nantucket, Cape Cod, and all "along-shore people" about landing and getting off a beach.

I am, very truly, your servant,

R. B. Forbes,

One of the Trustees of the Massachusetts Humane Society.

MERCANTILE LAW CASES.

MARINE INSURANCE.

In the British Court of Chancery. Stewart and others, *vs.* the Directors of the Greenock Marine Insurance Company.

This was an appeal against a decree of the Court of Session. The appellants here, the pursuers in the Court below, instituted an action against the respondents to recover the amount of certain policies of insurance effected on the ship Laurel, of Greenock, one for £1,500, and the other for £500. Insurances were effected with other companies to the amount of £6,500, the vessel itself being valued at £7,500. This vessel was insured at and from Liverpool to New York, and thence to any other port in the United States, or to Quebec; thence to a port of discharge in the United Kingdom, and thereafter for a period not exceeding ten days, which days were allowed for the discharge of the cargo. The Laurel sailed from Liverpool to New York, and thence to Quebec, where it arrived in safety, and having fully delivered its outward cargo, took a cargo of timber, with which, on the 14th of July, 1842, it sailed from Quebec for Liverpool. On the 27th of that month it encountered icebergs, and during the night was struck by one or more of them so heavily over the bows that it became waterlogged. The nature of the cargo prevented the vessel from sinking, and the master and crew using great exertion, finally, on the 11th of August, brought it into Liverpool, where the master proposed to bring it into dock at once. This proposal was refused by the dock-master, who insisted that it should be moored outside the dock, and in the open river. This was done, and, as the tide ebbed, holes were bored in the bottom of the vessel, and the water in the hold was enabled to escape. The vessel grounded, and was much injured by being treated in this way. The holes were stopped as quickly as possible after the water had escaped, and the vessel then floated with the rising tide, and was taken into dock. The cargo was discharged, and a survey of the vessel was made. It was found that it had sustained very serious damage, both from the icebergs and from its being allowed to ground outside the dock gates. On the 1st of September, the owners, acting on the report of the persons whom they had employed to survey the vessel, wrote a letter to the underwriters, dated on the 1st of September, enclosing the report, and abandoning the vessel as a total loss. As it appeared that the cost of the repairs would amount to £3,000 or £4,000, the underwriters tendered that amount; but the owners refused to accept it, and insisted on a total loss. The manager of the underwriters then wrote to say that he was authorized to offer a full indemnity for the loss, which he proposed to calculate in a particular manner. This offer was likewise refused. The pursuers then brought their action to recover as for a total loss; and the respondents pleaded that, as the damage sustained by the Laurel through the collision with the iceberg, did not amount, either actually or constructively, to a total, but only to a partial loss, the pursuers are not entitled to abandon the ship, and to claim as for a total loss; and secondly, that even supposing the pursuers entitled to abandon, and to claim as for a constructive total loss, they can only do so subject to their accounting, by way of compensation to the respondents, as abandonees of the ship, for their proportion of the amount of freight earned by the ship after the accident through which such constructive loss was occasioned. The freight of the vessel had been separately insured for £1,500. The cargo having been discharged in the manner already mentioned, the freight paid to the owners was £1,402. The case went on to trial upon the following issue: whether the ship, through the injury sustained on the 27th July, 1842, and the 11th of August, 1842, or on one or other of these dates, and during the currency of the policies, became a wreck, and was totally lost. The jury found that the Laurel was properly abandoned, and was not worth repairing; that the damage to it arose from coming in contact with an iceberg, and from grounding outside the dock at Liverpool; that the vessel was seaworthy when the voyage was begun, and that there was

a total loss; and the claim of the defendant to a portion of the freight was, as a question of law, reserved for the consideration of the Court. The case was considered by the consulting judges, who found, "that the defendants, with whom insurance was effected only on the ship, are entitled, on accounting with the pursuers, to have placed to their credit their due proportion of the freight, amounting to £1,402, subject to such deductions as may be found competent to affect their interest in the said freight." It was against this decision that the appeal was brought. The case was argued in June, 1847, by Sir F. Thesiger and Mr. Watson, (Mr. Anderson was with them,) for the appellants; and Sir F. Kelly and Mr. Wickens, for the respondents.

The Lord Chancellor now moved the judgment of the House. After stating the facts of the case, and the finding of the jury, he said he was of opinion that the judgment of the Court below ought to be affirmed, with costs. His noble and learned friend, Lord Brougham, who had likewise heard this case argued, had sent him a written communication, declaring the same opinion, and he therefore moved the judgment of affirmance.—Judgment of the Court below affirmed with costs.

LIABILITY OF SHIPMASTERS FOR DETENTION OF SHIPPERS' PRODUCE.

During the session of the Circuit Court, says the *Louisville Courier* of the 19th September, 1848, Judge Bullock made a decision, which, if sustained, will prove of much importance to masters or owners of steamboats. A mercantile house in our city sued the owners of the steamer *Grace Darling*, for detaining a lot of flour several weeks, shipped on her to New Orleans, hereby causing the loss of a considerable sum of money on the venture by the decline in the New Orleans market. The merchant had one thousand barrels, about half of which was shipped on the steamer *Old Hickory*. The captain of the *Grace Darling* engaged the residue of the flour for his boat at an advance of five cents per barrel for freight, stipulating to proceed to New Orleans immediately in consideration thereof. The boat, however, was detained for some time, and the price of flour had materially declined in the Southern market. The judge decided *in favor of the plaintiffs*, and ordered that the owner or owners of the *Grace Darling* shall pay damages to the full amount of the loss sustained by the shippers in the detention of their produce from the market.

THE LAW OF WRECK AND SALVAGE.

At the Sculcoates Hall, Mr. Saxelbye, as the Receiver of Droits of Admiralty at Hull, (England,) appeared before the magistrates to support two informations against parties for an infringement of the Wreck and Salvage Act, 9 and 10 Vic., c. 99. The first information was against a person for picking up, and not reporting to the receiver of droits, a piece of timber belonging to Mr. Lynn, the railway contractor, which had floated from the works at New Holland to the opposite shore; and the second information was against a party for purchasing and retaining the timber. By the 5th section of the Wreck and Salvage Act it appears that any person finding any goods at sea, or in any tidal water, or stranded on the shore, is bound forthwith to report the same, in writing, to the Receiver of Droits of Admiralty, and place the same at his disposal; and every person who shall keep possession of, or retain, or conceal, or secrete, any such goods, or shall deface, take out, or obliterate any mark or number thereon, or alter the same in any manner, or shall not forthwith report and place at the disposal of the receiver any such goods in the manner aforesaid, shall forfeit all claim to salvage, and shall, on conviction, forfeit any sum not exceeding £100, and also forfeit and pay double the value of the article to the owner thereof, if claimed, or to her Majesty, if the same become a droit of the Admiralty; and the parties may also be proceeded against as the receivers of stolen goods. Mr. Frankish appeared on behalf of the defendants, and the magistrates being satisfied that the offence had been committed through ignorance of the act above mentioned, and without any fraudulent intent, the informations were ultimately withdrawn, on defendants paying the value of the timber and the expenses. Mr. Saxelbye, at the same time, intimated that he should in future proceed against all parties who might in any manner offend against the provisions of the act.

COMMERCIAL CHRONICLE AND REVIEW.

THE MONEY MARKET—IMPORTS AND EXPORTS OF NEW YORK FOR LAST FOUR MONTHS—SPECIE MOVEMENT—IMPORTS AND EXPORTS OF SPECIE AT NEW YORK—DUTIES COLLECTED AND SUMS BORROWED BY THE GOVERNMENT, WITH RATES OF EXCHANGE, AND PRICE OF UNITED STATES STOCKS—UNITED STATES STOCKS SOLD ON FOREIGN ACCOUNT—REVENUE AND EXPENDITURE OF THE UNITED STATES—VALUE OF PRODUCTS—OPERATIONS OF A TARIFF—IMPORT OF GRAIN AND FLOUR INTO GREAT BRITAIN—DEMAND FOR CAPITAL IN RAILROAD INVESTMENTS—THE NEW ENGLAND RAILROADS—MASSACHUSETTS SAVINGS BANKS—THE RAILROAD MOVEMENT IN NEW YORK—COMPARATIVE VALUE OF REAL ESTATE IN BOSTON AND NEW YORK—TOLLS OF THE ERIE CANAL FOR TEN YEARS—ERIE RAILROAD—AREA OF ITS INFLUENCE—ITS IMPORTANCE AS AN AVENUE FOR WESTERN TRADE—ITS INFLUENCE UPON THE SUPPLY OF COAL, ETC., ETC.

THE money markets of the leading cities have, as the season has advanced, become more easy; that is to say, money has rather fallen in price, notwithstanding that the importations continue to a considerable extent larger than in former years at this season. In our number for August we gave the imports and exports of the port of New York for the twelve months composing the fiscal year which ends June 30th. The following table indicates the progress of the trade in the four succeeding months:—

IMPORTS AND EXPORTS OF NEW YORK FOR FOUR MONTHS, ENDING WITH OCTOBER.

	EXPORTS.				IMPORTS.			
	Specie.	Free.	Dutiable.	Domestic.	Specie.	Free.	Dutiable.	Duties.
July	$744,983	$29,532	$58,949	$2,090,285	$64,631	$650,055	$7,046,389	$1,794,236
August	331,031	79,865	101,836	2,172,845	133,855	1,128,555	9,796,778	2,533,343
September	561,455	41,421	175,346	2,926,212	197,098	513,749	8,158,299	2,119,571
October	882,423	24,924	221,789	3,576,057	127,998	439,587	5,136,332	1,328,833
Total 1848	2,519,892	175,742	557,920	10,764,999	523,582	2,731,946	30,137,797	7,775,983
" 1847	1,119,143	223,657	497,327	17,323,434	685,093	2,494,360	33,790,479	8,716,265

These aggregates for the four months indicate for the last year a larger import and export than for the same four months of the present year; but for the last *two* months, that is to say, September and October, the balance is in favor of the present year. It was in the month of October last year that the exchange between this country and England began to feel the influence of the revulsion in England, and specie went forward to the extent of $674,548 in October, by reason of the distrust of bills. In November that feature began to have a serious influence, and powerfully affected the money market in the cities. The state of affairs was described as follows in our article for December, 1847:—

"The movements of specie for the quarter ending with October were, for the port of New York, nearly as follows:—

	Duties paid.	Export.	Import.
August	$3,337,541	$66,000	$195,155
September	2,096,604	550,925	94,548
October	1,229,296	674,548	101,170
Total	$6,663,441	$1,291,473	$390,873

Specie in Assist. Treas., N. York.	
August 1	$2,187,836
September 1.	6,426,356
November 1.	4,551,841

"This large movement of specie reduced the amount in the city banks from $10,769,732 in August, to $7,779,000 in November; and, inasmuch as that the imports fell off with the close of October, it was supposed that the banks, which had contracted towards the 1st of November, when their accounts are returnable to the comptroller, would resume their discounts. Continued adverse news from

Europe, however, was unfavorable to the negotiation of bills, and enhanced the disposition to ship specie. Sovereigns advanced to $4 87½, five-franc pieces to 94½, and Mexican dollars to 1¼ a 1½ premium, and the shipment became active, although the best bills could be had at 9¼. and were dull at New Orleans at 3½ a 4 per cent; presenting a singular anomaly, and showing that heavy losses were incurred in the shipments of specie, rather than trust to the payment of bills in England. The packets of the 1st November carried out considerable sums, and the shipments continued, until the amount reached near $2,000,000 by the middle of the month. This was a serious drain in the state of affairs with the banks presented in the above table, and the institutions immediately adopted the most stringent measures. A very small proportion, only, of the notes offering, were discounted, and loans on stocks were called in rigorously. Importers' paper, particularly, was struck at; and first class auctioneers' paper sold from 1½ a 2 per cent per month, while it became impossible to procure loans on New York stocks, the first class of security, at a large margin. The banks rigorously drew balances from each other in specie, and adopted a general system of curtailment, that exceedingly oppressed the market; causing prices, particularly of stocks, to fall rapidly."

This export of specie continued on English account until February, when it nearly ceased, and began slightly to react, when the events in Europe renewed the efflux, which has continued important until the present moment. It is known that under the operation of the present Independent Treasury law, the payments into the United States treasury are in specie only, consequently the duties form a continual drain upon the banks for specie. During the past year the government has borrowed considerable sums in specie for war expenditures; and these three causes, viz, the export, duties, and loans, have together formed a formidable demand for the precious metals, and to the following extent monthly:—

IMPORT AND EXPORT OF SPECIE AT THE PORT OF NEW YORK, AMOUNT OF DUTIES COLLECTED AND SUMS BORROWED BY THE GOVERNMENT, TOGETHER WITH THE RATES OF EXCHANGE, AND PRICE OF UNITED STATES 6 PER CENT STOCK OF 1862.

	Imports.	Exports.	Duties.	Loans.	St'g.	6 p. c. Stock.
November	$58,915	$1,455,946	$988,119	2,012,450	9	102¼
December	39,712	1,788,867	856,576		10¼	99
January	48,032	1,738,554	2,305,017		10¼	98⅛
February	40,502	433,226	2,416,497	3,739,370	10	96
March	22,781	452,507	1,553,003		9¾	103¼
April	165,919	1,180,422	1,686,506		8¾	103¾
May	133,922	2,249,253	1,312,036	4,643,300	10¼	103
June	69,532	1,871,972	1,144,497		11	104
July	64,631	744,983	1,794,236		9¾	104
August	133,855	331,031	2,533,343	7,674,650	9¼	103⅛
September	197,398	561,455	2,119,571		9¼	103¼
October	127,998	882,423	1,328,833		9⅜	103
November	18,130	210,000	644,763		8⅞	107
Total	$1,135,027	$13,900,639	$20,681,995	$18,069,770		

These figures show a remarkable progress in affairs. It will be observed that the import and export of specie is that which is entered directly to and from the custom-house at this port. Considerable sums, probably near $5,000,000, last fall and winter left here for Boston, to go by the Cunard steamers, which does not appear on the New York customs' returns. The government has taken for loans $18,069,770, and for duties $20,681,995, and the nett export is at least $17,000,000. These sums together make $55,751,765 paid by the city of New York in the twelve months closing with October. The remarkable fact is, that while these

enormous payments have been made, money has constantly been becoming easier; that is to say, instead of being unable to procure money at all upon stocks, as was the case last year, it is now easily attainable at the legal rate, say 7 per cent; and good auctioneers' paper is done at 10 per cent per annum. On the 1st of November last year the amount of specie in the assistant treasury at this port was $4,551,841. This year, at the same time, it was $855,330. It will further be observed in the above trade tables that the ease of the money market in November cannot be ascribed to stock business, inasmuch as the trade of the port has been larger than last year. Thus for October and the first week in November, the import of goods has been $7,048,181, and for the same time last year $5,998,514. The exports in the same time have increased $1,200,000, making an increase of $2,500,000 in the business of the port this year, naturally requiring more money. It has been the case, however, that very considerable sums of United States stock have gone abroad, independent of the $3,000,000 placed in the London market by Messrs. Corcoran and Riggs, of Washington. The amounts sent weekly have been as follows:—

EMISSION OF UNITED STATES STOCK ON FOREIGN ACCOUNT.

	Week ending							
To—	Oct. 7.	Oct. 14.	Oct. 23.	Oct. 28.	Nov. 4.	Nov. 11.	Nov. 18.	Total.
	Dollars.	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
England.....	22,000	29,000	95,050	354,000	32,900	764,100	468,500	1,765,550
Germany.....	26,000	13,000	26,000	65,000	27,000	167,000	25,500	349,500
France.....	20,000	25,000	3,000	89,300	17,600	36,000	9,700	200,600
Switzerland..	34,000	5,000	.....	.....	.....	1,800	.....	40,800
Cuba.....	5,000	.....	.....	.....	.....	.....	.....	5,000
Portugal.....	.....	7,000	.....	.....	.....	.....	.....	7,000
Canada.....	.....	2,500	.....	5,000	.....	80,000	8,600	96,100
Ireland.....	.....	.....	6,000	.....	4,000	.....	.....	10,000
Belgium.....	.....	.....	.....	3,000	.....	.....	.....	3,000
Brazil.....	.....	.....	.....	10,000	.....	4,000	14,000	28,000
Spain.....	.....	.....	.....	30,000	19,000	13,000	.....	62,000
Madeira.....	.....	.....	.....	.....	.....	7,000	.....	7,000
Total.....	107,000	82,100	130,050	556,300	99,600	1,073,700	525,300	2,574,550

This gives an amount of $2,574,550 sent abroad in seven weeks, and the bills against much of this investment have been upon the market constantly. It may be remarked that the whole figure does not represent fresh sales, some amounts of prior sales being returned for transfer. Eminent banking houses have, it is said, taken much of that drawn by Messrs. Corcoran and Riggs; but the amounts drawn against continental investments have been offering in various hands. About one-half the amount issued in the week October 23, was to Mr. Packenham, the English minister. In the week October 28, $130,000 was to Corcoran and Riggs. In the week November 11, $47,000 was to Madam Weiss, the directress of a dancing *troupe*. The English holders generally prefer the coupon stock, as a matter of course. We mention these details in order to show the nature of the stock operations going on to an extent that has affected the exchange market, as well as relieved the stockholders of pressure. There has also been paid five instalments, amounting to $1,098,000, of Mexican indemnity, due to United States by the government under the terms of the Mexican treaty of peace. The relief thus afforded to the stock market, together with the amount of the department, that owing to the flourishing state of the finances there will not be required any further instalments upon the last loan until Janu-

ary has placed the market for those securities upon a firmer footing. The condition of the United States finances for the year ending September 30, according to the quarterly reports of the departments, are as follows :—

UNITED STATES REVENUE AND EXPENDITURE.

Quarter ending	Customs. *Dollars.*	Lands. *Dollars.*	Miscellaneous. *Dollars.*	Loans. *Dollars.*	Total. *Dollars.*
December 31	5,337,874 84	908,956 36	48,500 00	1,012,450 00	8,307,790 20
March 31	9,383,000 00	700,000 00	176,200 00	5,387,820 00	15,647,020 00
June 30	5,888,567 89	781,795 81	36,375 50	4,643,300 00	11,349,039 00
September 30	9,010,000 00	470,000 00	101,000 00	7,674,650 00	17,255,650 00
Total.....	29,619,442 73	2,860,752 17	362,075 50	19,718,220 00	52,559,499 20

Expenses—	State Dep't.	War Dep't.	Navy Dep't.	Treas. loans, &c.	Total.
December 31	1,641,053 11	3,308,823 15	2,649,749 15	1,706,793 57	9,305,918 98
March 31	1,389,582 01	7,241,659 55	1,964,771 49	6,458,359 46	17,054,372 51
June 30	1,446,978 37	6,698,470 36	2,395,066 12	2,585,527 06	13,126,041 91
September 30	3,371,918 27	8,064,851 38	2,979,022 17	968,050 38	15,383,842 20
Total.....	7,849,531 76	25,313,804 44	9,988,608 93	11,718,730 47	54,870,175 60

In the payments of the last quarter by the State department is included the first instalment paid to Mexico under the treaty of peace ; and in the payment of the Treasury department is included the $800,000 redeemed of a house in New York. The next quarterly return will probably embrace the re-issue of a similar amount. It is observable that the ordinary revenue of the department, under the heads of customs, lands and miscellaneous, amounts to $32,842,270 40, a sum which exceeds, by near $9,000,000, the whole expenditure of the year 1845, before the Mexican war commenced. To that figure the expenditures will probably be again reduced, enhanced, however, by an increase of $1,000,000 per annum for interest on the new debt, and $3,000,000 per annum for the four annual instalments due Mexico under the treaty. This will raise the expenditure to $27,000,000, and at the rate of income now accruing will leave a surplus of $5,000,000 per annum for the sinking of the debt, which, were it all payable at pleasure, would effect it in seven years. This favorable condition of the federal treasury is likely to be still further improved for the coming year through the influence of the enhanced exports of produce, the proceeds of which must be returned in the shape of dutiable goods, possibly at somewhat enhanced prices from those which have obtained in the last few months. The effect of the revolutions in Europe has been to cause a vast amount of European labor to be sent here for little money ; that is to say, fabrics have been sold at a less sum than would replace the capital expended in its production. As an instance, we have seen Belgian cloths sold at 50 cents, which cost 117 to produce. The manufacturing capital of Europe cannot stand such sacrifices, and production must cease or go on at advanced prices, to exchange for United States produce. Inasmuch as that our tariff has an ad valorem operation, a rise in the price of foreign fabrics will enhance the revenue. American produce, particularly cotton, has sold and is selling very low, but it may be doubted whether the actual proceeds is less than usual ; that is to say, measured in money we get much less, but measured in goods, the product of labor, we get much more. The capital of Europe is being squandered for the benefit of the United States. In the case of farm produce we maintain the money price, and this price commands a much greater quantity of European labor than usual. The exports of farm produce from the United States continues on an ex-

tended scale, being now considerably larger than at the corresponding period of last year, with every prospect of a large continued demand in England. The importation of all kinds of grain and flour in Great Britain for several years has been as follows, together with the nature of the season, the average price of wheat, and the quantities remaining in bond :—

IMPORT OF GRAIN AND FLOUR INTO GREAT BRITAIN.

	Grain.	Flour.	In bond.	Price.	Season.
	Qrs.	*Cwt.*		*s. d.*	
1841.....	3,258,698	1,275,656	186,003	64 4	Average.
1842.....	3,369,335	1,151,827	804,121	57 3	Good.
1843.....	1,305,594	442,462	.....	50 2	"
1844.....	2,747,951	984,704	.....	53 8	"
1845.....	2,162,644	953,258	1,068,050	48 7	Potato fails.
1846.....	3,864,666	3,356,812	.....	53 4	"
1847.....	8,047,082	7,158,620	.....	83 6	Good.
1848, 8 months....	3,193,928	643,192	108,240	49 10	Potato fails.

It will be observed, that in years of good harvest the supplies of foreign grain required in aid of the English production were very large, as much so as in former years of scarcity. The crop of potatoes was damaged in 1845, and the supplies required in 1846 increased considerably at an improved price, and the failure of 1846 still further raised the foreign demands, notwithstanding the advanced prices, because the large expenditure upon the public works probably counteracted to some extent the effect of the advanced price in diminishing consumption ; but the harvest of 1847 was good, yet a formidable quantity has been required in aid of it. The crop of 1848 is now short, and again must 1849 be a year of large importations, and the abundance of money must follow the accumulations of capital.

Almost monthly the avenues of trade are increasing, and facilitating the transportation of the rich produce of the interior to the Atlantic border. The demand for capital, for the prosecution of these great lines of traffic, has been a decided cause of the high rate of money on the Atlantic border. Massachusetts has been particularly active in the construction of these noble works. In the last three sessions there have been chartered the following roads :—

		Capital.
1846.....	18 roads and branches.....	$5,795,000
1847.....	16 " "	4,822,000
1848.....	19 " "	7,105,000
	Stock of roads in operation increased.....	3,945,000
	Total.....	$21,667,000

The total length of roads in New England is 1,126.54 miles, and the cost over $37,000,000. This large expenditure has been effected only by absorbing all the surplus earnings of almost all classes of society. The accumulating dividends of capitalists of all grades have sought this direction, and, as a consequence, a far less amount has been available for the ordinary employments of industry. Even the savings bank deposits have been applied in this direction. The direct investments of the Massachusetts' savings banks in these works were $44,389, and loans upon railroad stock $300,698. The income of the roads increased from $1,961,323 in 1846, to $2,564,190 in 1847. The effect of these multiplied means of communication upon the trade and property of Boston is magical. New York, which has also made great efforts in railways and outlaid much capital in their construction, does not as yet feel their influence upon its business, but has now in

progress, and about to be opened, four lines which must produce an immense influence. These are the New York and New Haven, which will probably in January, 1849, connect New York with Boston; the Harlem Railroad, to be opened in January to Dover Plains, Dutchess county, 83 miles from New York; the Hudson River, which will open to Poughkeepsie in the course of the year; and the Erie Railroad, now running to Port Jervis, on the Delaware, and to be completed to Binghamton in January, a distance of 200 miles from Piermont, on the North River, and it will then be the longest road in the United States. The Central Railroad of Georgia is 192 miles, and the Boston and Worcester and Western railroads, connecting Boston and Albany, are together 200 miles. These four roads to run into New York have taken near $12,000,000 of New York capital, which, as yet, is unproductive, yet all of these works must in a short time become very productive. The Harlem Railroad has, unfortunately for the interests of the city, been managed more with a view to the fluctuation of its stock in the market, where it for years has been the "stalking horse" of speculation, than for its own welfare. The opening of the New Haven road in January, running 16 miles upon the Harlem, will benefit the city trade more than the latter company. The eccentric operations of the Harlem company have greatly retarded the progress of that spirit of enterprise necessary to the advance of New York in the direction necessary to preserve its trade, and some degree of rivalry exists between the Erie and Hudson River roads. This should rather be a spirit of emulation, inasmuch as both are necessary to the welfare of the city. The population of the city in 1800 was 60,489; in 1820, 123,706; in 1840, 312,710, thus more than doubling every 20 years. Since this has been the ratio of increase for 60 years past, there is no reason to doubt its continuance, and, in that case, in 30 years from this time the population will be 1,300,000, which will involve the occupation of Manhattan Island to Harlem River. A chief element in this increase is the cheap supply of the necessaries of life. The Croton River gives a sufficient supply of water, the mines of Pennsylvania supply fuel in abundance, and the railroads are the means of supplying this as well as fresh provisions in any extent. The Erie Railroad last year, running 53 miles, supplied the following articles:—

	Quantity.	Est. value.		Quantity.	Est. value.
Milk.....qrts.	7,090,430	$283,616	Calves.....head	11,457	51,649
Butter.....lbs.	3,758,440	676,519	Hogs.....	5,548	38,366
Fresh meat.....	3,007,890	150,490	Sheep & lambs.....	8,198	29,975
Cattle, (beef,)....head	2,362	86,853	Strawberries...bskts.	389,920	15,596

In addition to the above, large quantities of poultry, game, fruit, vegetables, &c., are brought to market. The freight received by the road for the transportation of milk alone, was $35,450. This road negotiated the remaining $500,000 of bonds received from the State on the 20th November.

That the great advantage of railroads is in the stimulus they impart to the business of the cities with which they connect, appears very evident in the comparison of New York and Boston. In the New England States there are 1,264 miles of railroad; in the State of Massachusetts there are in operation 880 miles, and these have cost $31,019,089 capital paid in, and $11,045,740 borrowed, making $42,065,829 actually expended within a very few years; whilst New York, as we have remarked, had depended almost entirely upon her natural communications. The following figures show the assessed valuations in Boston and New York for many years:—

	BOSTON.			NEW YORK.		
	Real estate.	Personal.	Total.	Real estate.	Personal.	Total.
1841	$61,963,000	$36,043,600	$98,006,600	$186,350,948	$68,843,672	$255,194,620
1842	65,499,900	41,223,800	105,723,700	176,512,342	61,294,559	237,806,901
1843	67,673,400	42,372,600	110,056,000	164,955,314	63,064,575	228,001,889
1844	72,048,000	46,402,300	118,450,300	171,936,591	64,023,456	235,960,047
1845	81,991,400	53,957,300	135,948,700	177,207,990	62,787,527	230,995,517
1846	90,119,600	58,720,000	148,839,600	183,480,934	61,471,470	244,952,404
1847	97,764,500	64,595,900	162,360,400	187,315,386	59,837,917	247,153,303
1848	.....	.....	.....	193,027,576	61,164,451	254,192,027

It will be observed that the different modes of valuation in the two cities are such that the figures do not give a correct idea of the actual comparative wealth, but in a series of years they show the comparative progress, more particularly in respect of real estate, which, while that of New York has remained nearly stationary, that is to say, was nearly the same in 1847 as in 1841, that of Boston has increased 60 per cent in value! This has been the direct result of the railroad influence. It will be observed that notwithstanding the number of persons that have moved from Boston into neighboring towns, the increased value of the property taxed is $74,000,000, *nearly double the whole cost of the railroads.* That New York has taken a start during the past year, is to be ascribed to the general prosperity and the growing influence of the Erie Railroad. The Erie Canal was opened in 1825 through a northern or central tier of counties, the population of which was, by the State census of 1825, 394,636. As the Western States bordering the lakes became settled, not only did the canal become necessary to the local business of those counties, but to the transit of annually increasing quantities of western produce. The business of that work for ten years has been as follows:—

AMOUNT OF TOLLS ON THE ERIE CANAL FOR TEN YEARS.

Tolls.	For 5 years ending Jan., 1839.	For 5 years ending Jan., 1844.	Total, 10 yrs.
On produce of other States.....	$792,359	$2,327,346	$3,119,705
" this State.....	3,376,129	3,298,200	6,674,329
On merchandise going west.....	2,388,037	2,661,733	5,049,770
Total.....	$6,556,525	$8,287,279	$14,843,804

This table, from official sources, shows the gross amount of tolls derived alone from the Erie Canal in the last ten years, and the proportion drawn from the produce of other States, as distinguished from that gathered from the produce of this State. The tolls on produce from other States, is that paid on produce shipped at Buffalo and Black Rock; of that paid on merchandise going west, at Albany and Troy, is to the extent of 20 per cent on goods going to other States.

The Erie Railroad is now progressing through the lower tier of counties, the population of which was, in 1845, 362,103, or about the same as the upper tier when the canal was built. The whole area commanded by this road is 12,000,000 acres of the best land, and the population occupying it, including the upper Pennsylvania counties, numbers 1,200,000. The resources of this country and these people are to be stimulated into activity by this road, which strikes the Erie lake at a point open for navigation in the spring four weeks earlier than at Buffalo. At this point it will receive the produce of Iowa, Wisconsin, Illinois, Indiana, the Canadas, Michigan and Ohio. The aggregate population of these States communicating with the lakes is 2,500,000, and their prolific lands are crossed with railroads and canals, pouring almost a limitless quantity of produce into Lake Erie as

a basin. For several weeks after Buffalo harbor and the Welland Canal are closed, this produce may accumulate at Dunkirk as the *only depot*, and be carried all winter to New York over a descending grade throughout the 450 miles, accumulating in its way the traffic of the vast tract and people we have described, fed through lateral railroads. In the spring this route is the first opened, and in addition to the lateral railroads, the traffic from Buffalo will pass through Seneca lake over the road to New York. It is to be observed that the Erie Railroad must become not only the great avenue for fuel from the Pennsylvania coal mines to the city of New York, but also westward for the supply of western New York from the same prolific source. The Reading Road, running 100 miles from the mines to Philadelphia, has cost near $11,000,000, and brought down last year 1,256,567 tons coal, thus establishing the capacity of a railroad even at enormous cost to carry coal in opposition to a canal. The Delaware and Hudson Company run a railroad from the mines, 16 miles, to Honesdale on the Delaware, thence 108 miles by canal to Rondout on the Hudson river, 90 miles distant from New York. This is a route ot 204 miles, and the coal is twice handled. This Delaware Canal cost $3,000,000, and the stock sells at 135 per cent. It last year brought down 352,144 tons. Now the Erie Railroad crosses the canal at Port Jervis, 98 miles from New York; that is to say, with a capacity equal to the Reading Road for carrying coal, it is 100 miles shorter to New York than the Delaware Canal, or it forms the base of a nearly equilateral triangle, of which the Delaware Canal route forms the two sides. It becomes evident that this railroad must be the route for coal to the New York market to the extent of 500,000 tons per annum. The cost of the coal at the mines is $1, and may be delivered in New York at $3 50. At Athens the Pennsylvania North Branch Canal delivers coal from the Pennsylvania basin in such abundance as to enable the Erie Railroad to supply western New York and the lake trade at Dunkirk. This road will ultimately have a larger coal business than the Reading Road, and will cost less money than that work. That is to say, 450 miles of Erie Road will have cost no more money than 100 miles of Reading Road, and a coal business equal to the whole trade of the Reading will be but a *secondary consideration* to its other traffic. In order not to interfere with its regular business, it may by its branch deliver the coal at Newburgh, which will be 23 miles nearer New York than the Delaware Canal route, and be open all the year round.

The distance from Boston to Lake Erie is 522 miles, from Philadelphia by railway and canal 558 miles, from Baltimore by railroad, via the Ohio river, 505 miles. While the total length of the Erie Railroad is 450 miles—72 miles shorter than to Boston. The capacity of the Erie Road to carry freight is indicated in the fact that its track is the broadest in the country, being 6 feet, while the northern lines are 4 feet 8½ inches. This broad track is laid with a heavy T rail, and furnished with such working stock as will transport in the best manner any quantity of produce on a descending grade to the Hudson. This road has struggled with the greatest difficulties, but is now safe. Under the present able management, it has been opened to Port Jervis on the Delaware, 98 miles from New York. At that point it crosses the Delaware and Hudson Canal, and strikes the Delaware river two miles beyond. This stream is crossed on one of the most magnificent of bridges, being 750 feet long and 60 feet high. It is supported on five stone piers of immense strength, to resist the floods of the Delaware, which

rises at times 40 feet when swollen by mountain torrents. The span of the arch on the Pennsylvania side is 160 feet, of that adjoining 150 feet. On the completion of this splendid structure in December next, another section of the road will be opened to Binghamton, 127 miles from Port Jervis, and 225 miles from New York. We shall then realize the fact that the line will be the *longest and most important railroad in the world*, and its income will be commensurate with its importance. It will be observed that although it will on its completion drain an area of 12,000,000 acres, and a population of 1,200,000 persons, the section now in operation to Port Jervis communicates with only 40,000 persons, and an area of 428,890 acres. Yet its income is $1,000 per day, and its nett profits $150,000 per annum! The country between Port Jervis and Binghamton, to be opened in January next, embraces an area of 3,276,480 acres, and a population of 100,000 persons. These resources will at once be added to the road, with but little increase in running, and this portion is the most expensive of the whole to build. The most brilliant success seems now to await this stupendous undertaking, and while the southern tiers of counties will be stimulated by access to market, the growth of New York will receive a new spur in this development of new resources.

COMMERCIAL STATISTICS.

LIVERPOOL ANNUAL CORN REPORT.

IMPORT AND EXPORT OF GRAIN, MEAL, FLOUR, ETC., INTO AND FROM THE PORT OF LIVERPOOL FOR EIGHT YEARS.

THE period having arrived at which it has been customary to consider the year, as respects the corn trade, to terminate, comparative tabular statements of the annual imports and exports of grain, meal, and flour, into and from the port of Liverpool, may not be without interest. The following table shows the average yearly *supply* into Liverpool for the twelve years prior to the passing of the corn law in 1842, and the quantities received during the seven subsequent years, the last of the series ending on the 30th ult.

AVERAGE YEARLY IMPORT OF GRAIN, ETC., INTO LIVERPOOL, FOR 12 YEARS, ENDING 31ST AUGUST, 1841.

Year ending September 30—	WHEAT. Coastwise and Ireland. *Qrs.*	WHEAT. Colonial. *Qrs.*	WHEAT. Foreign. *Qrs.*	FLOUR. British. *Sacks.*	FLOUR. Foreign. *Bbls.*	FLOUR. Colonial. *Bbls.*
1841.....	292,054	23,400	170,442	192,807	175,019	36,022
1842.....	172,365	24,384	653,637	65,947	180,505	221,939
1843.....	125,847	8,934	76,852	155,507	10,931	79,680
1844.....	223,502	22,083	240,227	259,556	155,200	226,833
1845.....	295,179	3,413	65,972	416,903	41,886	136,086
1846.....	194,501	49,038	287,451	264,983	877,659	246,276
1847.....	130,761	55,006	519,159	79,948	1,979,491	410,806
1848.....	137,438	2,826	218,681	156,964	227,285	105,127

Year ending September 30—	OATS. British. *Qrs.*	OATS. Foreign. *Qrs.*	BARLEY. British. *Qrs.*	BARLEY. Foreign. *Qrs.*	BEANS. British. *Qrs.*	BEANS. Foreign. *Qrs.*
1841.....	328,831	23,147	56,187	4,542	19,216	31,957
1842.....	197,468	13,403	39,360	20,967	12,450	49,751
1843.....	219,956	6,022	32,043	.....	10,231	12,978
1844.....	234,940	8,966	33,530	17,007	12,178	21,726
1845.....	232,220	10,591	35,664	17,785	11,649	42,633
1846.....	194,059	4,430	33,648	8,620	10,418	70,033
1847.....	100,552	66,307	30,596	57,992	13,556	115,418
1848.....	190,493	14,425	33,784	27,786	11,077	125,504

Year ending September 30—	PEAS. British. Qrs.	PEAS. Foreign. Qrs.	PEAS. Colonial. Qrs.	OATMEAL. British. Loads.	INDIAN CORN. Foreign. Qrs.	I. C. MEAL. Foreign. Bbls.
1841.....	3,754	17,173	4,576	191,331	.....	.....
1842.....	2,850	26,406	17,268	214,966	.....	.....
1843.....	475	981	2,412	362,040	.....	.....
1844.....	3,508	17,532	2,392	350,747	.....	.....
1845.....	3,613	9,728	4,586	229,424	37,918	.....
1846.....	12,686	5,031	1,765	138,095	192,026	.....
1847.....	9,646	24,400	10,715	57,256	1,171,608	430,534
1848.....	3,941	8,060	696	166,168	504,193	105,937

EXPORTS FOR TWELVE MONTHS ENDING 30TH SEPTEMBER, 1845, 1846, 1847, AND 1848.

Ending September 30—	WHEAT. Coastwise and Ireland. Qrs.	WHEAT. Foreign. Qrs.	FLOUR. Coastwise and Ireland. Sacks.	FLOUR. Foreign. Bbls.
1845.....	15,627	8,567	17,508	30,510	45,636
1846.....	30,510	.....	16,603	159,712	11,671
1847.....	33,115	4,901	43,887	541,278	47,611
1848.....	50,046	.....	20,979	221,144	2,163

Ending September 30—	OATS. Coastwise. Qrs.	OATS. Foreign. Qrs.	BARLEY. Coastwise. Qrs.	BARLEY. Foreign. Qrs.	BEANS. Coastwise. Qrs.	BEANS. Foreign. Qrs.
1845.....	1,984	12,409	1,199	108	3,043	161
1846.....	2,620	2,386	1,966	22	4,994	2
1847.....	9,105	8,900	19,800	609	2,943	1,462
1848.....	3,806	438	3,253	2	6,219	896

Ending September 30—	PEAS. Coastwise. Qrs.	PEAS. Foreign. Qrs.	INDIAN CORN. Ireland and Coastwise. Qrs.	I. C. MEAL. Ireland and Coastwise. Bbls.
1845.....	1,297	2,986	16,101	.....
1846.....	3,420	102	144,106	.....
1847.....	18,192	120	639,667	161,999
1848.....	1,648	28	491,907	189,567

With respect to the immense importation of American flour and Indian corn for the year ending 30th September, 1847, it may be necessary only to refer to the circumstances which called it forth; since that period the supplies thence of the former article have little, if at all, exceeded the average of the previous years. Of home produce we have this year had a large increase as compared with the previous year: from Ireland the excess amounts to 33,000 quarters of wheat, 77,000 sacks of flour, 90,000 quarters of oats, and 110,000 loads of oatmeal; whilst we have had a liberal supply of flour by railway and canal, from some distance in the interior. As naturally follows, the exports to Ireland and coastwise show a considerable falling off, particularly as respects American flour, of which the exports coastwise and to Ireland during the last twelve months were 320,000 barrels, and of Indian corn 150,000 quarters, less than the year 1846 to 1847.

At this period last year the stocks held here were estimated at 120,000 quarters wheat, 400,000 barrels flour, 300,000 quarters Indian corn, and 200,000 barrels Indian meal.

The following statement may be considered as a close approximation to the quantities of each article of the trade held here at the present time, free and in bond; those in bond being virtually free—the duties on all grain having reached the minimum point under the present law:—

	Qrs.		Bbls.		Qrs.		Sacks.		Bbls.
Wheat.	60,000	Flour..	30,000	Oats....	3,000	Oatmeal.	4,000	Barley.	5,000
	Qrs.			**Qrs.**		**Qrs.**			**Bbls.**
Beans.....	25,000	Peas.....		2,000	Indian corn.	20,000	Indian meal.		3,000

Little fluctuation has occurred in the value of the leading articles of the trade until the middle of July, when unpropitious weather set in, and continued with scarce an interruption for six or seven weeks, greatly to the injury of the growing crops. Potatoes also began to show extensive disease, being in some districts as much affected as in the calamitous season of 1846. These circumstances caused a good deal of activity on our grain market, and prices were put up 1s. to 1s. 3d. per bushel for wheat, 6d. per bushel for oats, 6d. per barrel for flour, and other articles in proportion. Our present rates are, best American white wheat, 8s. 6d. to 8s. 9d.; mixed, 7s. 10d. to 8s. 2d.; Danzig, 8s. 6d. to

9s.; Baltic red, 8s. 6d. to 8s. 8d.; Polish, 8s. to 8s. 2d., all per 70 lbs. Choice western canal and Canadian flour brings 33s. to 34s., and secondary quality 31s. to 32s. per barrel. English flour is selling at 42s. to 44s. per 280 lbs. Indian corn and corn meal have become favorite articles, and are extensively used in this country as well as in Ireland; both articles have found a ready sale, and we have no accumulation of stock; the present rates are 37s. per 480 lbs. for the best American white and yellow, and 35s. to 36s. for mixed. Indian meal is selling at 18s. per barrel. Egyptian beans command 28s. 6d. to 29s. per 480 lbs., and peas 40s. to 44s. per imperial quarter.

The weather during the month just closed has been highly favorable for the in-gathering of the crops of Scotland, Ireland, and our northern counties, but in the south the harvest was mostly got in in a damp condition, and the millers will require a large admixture of old wheat for some months to come. The interior markets are being abundantly supplied with old and new wheat from their own districts, at much under our prices, and the farmers are understood to hold a pretty large surplus of the crop of 1847. There is reason to apprehend that the yield of this year's crop of wheat will be below an average of years, and considerably under that of last year. A few new oats have reached us from Ireland and Scotland of superior quality, and they appear to be an abundant crop; they have sold at 3s. 6d. to 3s. 9d. per 45 lbs. We have had no fair specimens yet of the Irish wheat crop, but it is spoken of as being a bad yield, and middling quality, and certainly the few lots which have arrived here confirm this opinion. Barley is a good crop.

A fair portion of the potato crop may probably prove fit for human food, but the waste from disease is very great, and the apprehension that what now appears sound will not keep, is forcing them fast into early consumption. Under all circumstances, we must consider that a large importation of breadstuffs will be required from abroad; and as the law admitting foreign grain at the nominal duty of 1s. per quarter takes place on the 1st February next, this country will be looked to as the market for a large portion of the surplus crops both of America and the continent of Europe. With the exception of Belgium, and probably Holland, where the potato disease has again appeared, all the countries of Europe are reported to have superabundant crops of food. The crops of the United States are stated as being unusually great.

SHIP-BUILDING IN NEW YORK.

We give below a full report of Messrs. Brown & Bell's ship-yard, foot of Stanton-street, East River, from 1819 down to the present time, containing the name, class, and tonnage of each vessel, and the time in which she was built.

Messrs. Brown & Bell were both originally from Darien, Connecticut; a circumstance almost sufficient in itself to insure them their well earned and richly merited success. What State in the Union has given wings to commerce, genius to the mechanic arts, enterprise to every pursuit, and intelligence to the world in a greater degree than Connecticut? Every intelligent son of this world-known State feels an almost intuitive inspiration stimulating his energy, and inviting him to enterprise and triumph. They came to New York and served a regular apprenticeship at ship-building in the same yard which they now occupy. In 1817, after having learned their trade, they went to St. Stephens and there built the first steamboat (the first vessel of any kind) ever built in Alabama. They remained in this place about a year, and removed to Blakeley where they stayed about a year and a half, and returned to New York in 1819.

They took the yard of their former employers in 1819, and commenced business. They had no capital, but their credit being good they were able to go on with a steady success until 1823, when they were burned out, with a loss of $20,000 less than nothing. By their own exertions and the assistance of their friends they again started business.

In 1827, they had a severe embarrassment by too freely endorsing and aiding others; but they succeeded in accomplishing a settlement without making an assignment, and since have been going on prosperously. In 1832, their business became established beyond a question.

In all their business relations they have been remarkable for their energy, promptness, and fortitude, whether in prosperity or adversity. One remarkable evidence of promptness, which few business men can claim, is the fact that they have never failed paying off all their hands every Saturday.

Mr. Brown retired from business in January, 1848, with an ample fortune, the establishment being now in the hands of Mr. Bell, who is now building a steamer for the United States mail line to Liverpool.

They are part owners of nine ships in the Liverpool, China, and New Orleans trade, without reference to real estate, which is worth over $300,000.

SHIPS BUILT BY BROWN AND BELL.

1821	Orbit.....tons	465	1833	Francis Depeu.....tons	696
"	William Tell.....	414	1834	Troy.....	666
1822	Baltic Say.....	400	"	Silvie De Grasse.....	738
"	John Wells.....	442	"	Vicksburgh.....	554
"	Henry.....	306	1835	Shakespeare.....	827
"	New York.....	615	"	Montezuma.....	471
1823	Canada.....	615	"	Emerald.....	596
"	Calhoun.....	295	1836	Switzerland.....	638
1822	Savannah.....	267	"	Garrick.....	927
1824	Pacific.....	657	"	Sheridan.....	927
1825	Washington.....	979	1837	Siddons.....	927
"	Roman.....	601	1838	Eutaw.....	708
"	United States.....	829	"	Roscius.....	1,009
1826	Great Britain.....	893	1839	Rochester.....	779
"	Britannia.....	741	"	Patrick Henry.....	968
1827	John Jay.....	593	1841	Cornelia.....	1,184
"	Helen.....	548	1843	Liverpool.....	1,074
"	George Canning.....	637	"	Queen of the West.....	1,169
1828	Caledonia.....	741	1844	Houqua.....	706
1830	Hibernia.....	665	"	Sultana.....	692
1831	William Drayton.....	390	1845	Henry Clay.....	1,228
"	Congress.....	472	1846	Galena.....	851
"	North America.....	699	1847	Constitution.....	1,334
1832	South America.....	720	"	Samuel Russell.....	940
1833	Victoria.....	719	"	Maid of Orleans.....	1,050
"	Europe.....	743			
"	Mississippi.....	708		Total, 52 ships.....	37,813

STEAMERS.

1830	Eagle.....tons	668	1846	Vixen.....tons	241
"	Lion.....	668	1847	Rimae.....	656
1841	Jove.....	189			
"	Dan.....	189		Total, 7 steamers.....	2,852
1846	Spitfire.....	241			

BARKS AND BRIGS.

1827	Brig Havana Packet....tons	160	1841	Brig Florida Bianco.....tons	184
1828	Bark Cyrus Butler.....	472	1842	" Liberty.....	239
1830	Brig Seraphina.....	196	1848	Bark Rover.....	380
1831	" Monte Video.....	260			
1839	" Una.....	312		Total, 8 vessels.....	2,203

STEAMBOATS.

1824	Hudson.....tons	177	1833	William Gibbons.....tons	299
1825	Constitution.....	280	"	Tampico.....	144
"	Constellation.....	280	1834	Bangor.....	353
"	Washington.....	330	"	Columbia.....	417
1826	McDonough.....	265	1835	Frank.....	115
"	Marco Bozzaris.....	125	"	James Boatwright.....	175
"	Barnet.....	37	"	Massachusetts.....	660
1827	Independence.....	345	"	Rhode Island.....	587
1828	Benjamin Franklin.....	421	1836	Home.....	550
1829	Ohio.....	371	"	Saint Matthew.....	185
"	President.....	528	1837	New York.....	375
1831	Water Witch.....	187	"	Savannah.....	349
"	Boston.....	380	1838	Kosciusko.....	253
1832	Erie.....	490	"	Colonel Jewett.....	132
"	Champlain.....	490	1832	Jacob Bell.....	239
"	Hercules.....	191			
"	Providence.....	314		Total, 34 Steamboats....	10,455
1833	David Brown.....	192		Steamboats at the South, say five others.....	1,000
"	John Mason.....	189			

FERRY AND TOW BOATS.

1825	Tow boat Ohio.....tons	85	1837	Ferry boat Fulton.....tons		180
"	Tow boat.....	85	"	" Relief.....		100
"	Ferry boat Wm. Cutting....	150				
1834	" Pluto.....	100		Total, 6 vessels.....		670

SLOOPS, SCHOONERS, AND GUN BOATS.

1823	Schooner Maria.....tons	48	1845	Gun boat Isabella.....tons		77
1825	Sloop Rufus King.....	70	"	" Jane.....		77
1829	Schooner Ned.....	96	"	" Clara.....		77
"	" Albert	64	1844	" Lizzy.....		77
1837	" Amelia.....	171	1846	" Reefer.....		77
1840	" Anglona.....	85	"	" Bonite.....		77
1841	Gun boat Eagle.....	184	"	" Petrel.....		77
"	" Liberty.....	181	1848	Schooner J. W. Bell.....		100
1842	Schooner Mazeppa.....	184				
1844	Gun boat Matilda.....	69		Total, 17 vessels.....		1,860
"	" Emily.....	69				

PILOT BOATS.

1824	Gratitude.....tons	57	1838	John E. Davidson.....tons		91
1828	Thomas H. Smith.....	80	1839	Jacob Bell.....		86
1835	Washington.....	81				
1837	James Avery.....	61		Total, 7 vessels.....		552
1838	Joseph Leggett.....	96				

YACHTS.

1832	Wave .....tons	30	1844	Ianthe.....tons		59
1844	Addy.....	18				
"	Spray.....	41		Total, 4 vessels.....		148

RECAPITULATION.

52	Ships.....tons	37,813	19	Sch's, sl'ps, and gun boats.tons		1,860
7	Steamers.....	2,851	7	Pilot boats.....		552
8	Barks and brigs.....	2,203	4	Yachts.....		148
39	Steamboats.....	11,455	—			
6	Ferry and tow boats.....	670	142	vessels... .....total tons		57,553

IMPORT AND EXPORT TRADE OF JAVA IN 1847.

By official statements respecting the commerce of Java in 1847, it appears that the import trade of the island for the year, including specie and merchandise, was valued at 29,435,402 florins, against 36,120,685 florins in 1846, showing a decrease of 6,685,283 florins. Compared with 1845, the decrease is still larger, the import trade in that year being valued at 37,221,956 florins.

The principal articles of merchandise constituting this branch of trade have been received from Europe, America, and the Cape of Good Hope, the returns from these places giving an aggregate of 17,501,768 florins. The Eastern Archipelago figures for the next important sum, the produce received thence being estimated at 8,167,540 florins. England has, it is stated, supplied merchandise valued at 3,917,200 florins, against 5,440,800 in 1846; Holland 12,588,200 florins, against 11,073,100 in 1846; and France 538,100 florins, against 444,093 in 1846.

The exportations for 1847 are estimated at 60,216,700 florins, being a little in excess of 1846, when they amounted to 60,157,300 florins, but considerably below 1845, for which year they were valued at 68,0[illegible]3,000 florins. The chief products of the year 1847, contrasted with the returns for 1846, show the annexed results:—

	1847.	1846.		1847.	1846.
Rice.....florins	3,243,000	3,002,000	Indigo.....florins	4,444,000	4,379,000
Coffee.....	17,642,000	15,586,000	Tin.....	3,072,000	3,531,000
Sugar.....	18,444,000	18,123,000	Tobacco.....	1,980,000	2,140,000

NEW ORLEANS EXPORTS OF COTTON AND TOBACCO.

The editors of the *New Orleans Price Current, Commercial Intelligencer, and Merchants' Transcript*, have compiled from their records the following table, by which the comparative receipts and exports of cotton and tobacco at the port of New Orleans for a period of twenty-five years may be seen at a glance:—

STATEMENT OF THE RECEIPTS AND EXPORTS OF COTTON AND TOBACCO AT THE PORT OF NEW ORLEANS IN EACH YEAR, FROM 1822–23 TO 1847–48—A PERIOD OF TWENTY-FIVE YEARS.

Years.	COTTON.		TOBACCO.	
	Receipts. *Bales.*	Exports. *Bales.*	Receipts. *Hhds.*	Exports. *Hhds.*
1822–23	161,959	171,872	16,292	28,624
1823–24	141,524	143,843	25,262	25,910
1824–25	206,358	203,914	17,759	16,849
1825–26	249,881	250,681	18,242	18,231
1826–27	336,573	326,516	20,681	26,540
1827–28	295,853	304,073	29,443	35,098
1828–29	268,639	267,736	24,637	25,288
1829–30	362,973	351,237	32,438	28,028
1830–31	429,392	423,942	32,098	33,872
1831–32	345,646	358,104	34,174	35,056
1832–33	403,833	410,524	20,627	23,637
1833–34	467,984	461,026	25,871	25,210
1834–35	536,172	536,991	35,059	33,831
1835–36	495,442	490,495	50,555	41,604
1836–37	605,813	588,969	28,501	35,821
1837–38	742,720	738,313	31,588	35,555
1838–39	578,514	579,179	28,153	30,852
1839–40	954,445	949,320	43,827	40,436
1840–41	822,870	821,288	53,170	54,667
1841–42	740,155	749,267	67,555	68,058
1842–43	1,084,642	1,088,870	92,509	89,891
1843–44	910,854	895,375	82,435	81,249
1844–45	970,238	984,616	71,493	68,679
1845–46	1,053,633	1,054,857	72,896	62,045
1846–47	740,669	724,508	55,588	50,376
1847–48	1,213,805	1,201,897	55,882	60,364
Total	15,134,591	14,877,413	1,078,735	1,085,771

It will be seen that the total receipts of cotton at this port for the last twenty-five years have been 15,134,590 bales, and of tobacco 1,078,735 hhds. We have not time to go into an investigation of the average value of the receipts of each year, based upon the average of prices, but it may be safe to assume for cotton an average of $40 per bale, and for tobacco $70 per hhd. Upon these bases, then, the total value of cotton received at this port since 1822 would be $605,383,600, and of tobacco for the same period $75,511,450—making a grand total for these two leading articles of export of $680,895,050.

EXTENT OF THE NORTH-WEST COAST FISHERY.

The New Bedford Whalemen's Gazette gives the following as the average quantity of oil taken from 1843 to 1847, inclusive:—

In 1843,	108	ships	averaged	1,340	barrels.	Equal to 145,692	barrels.
1844,	170	"	"	1,528	"	" 249,760	"
1845,	263	"	"	954	"	" 250,639	"
1846,	292	"	"	869	"	" 253,748	"
1847,	70	"	"	959	"	" 67,130	"

The number of ships composing the north-west fleet of 1847 is estimated at 190; about 100 less than the fleet of the previous year.

SHIPPING TOUCHING AT ST. HELENA.

The St. Helena Shipping List gives a tabular statement of the ships which have anchored or communicated with that island during the past year, from which it appears that the

number of British merchant vessels which have touched at or passed the island was 652, against 589 in 1846. The number of vessels of war had been 25, and whalers 3, making a total of 680. French vessels 92, American 73, Dutch 110, Swedish 9, other foreign flags 35, and of captured slavers 24, making a total of 1,023 vessels against 993 in the year 1846. In 1833 the number of ships which had called at the island was 475, and in the following year 575. From another table it appears that the average time of passage from Calcutta to St. Helena last year was 79 days, the minimum being 68 days in April, and the maximum 92 days in July. The annual average in 1846, as also in 1843, was 83 days, and in 1834 80 days.

EARLY COMMERCE OF SALEM.

A correspondent of the *Salem Gazette* furnishes some interesting statistics, &c., of the commerce of Salem and Beverly near the close of the last and at the commencement of the present century. As matter of history, we transfer these statements to the pages of the Merchants' Magazine:—

In the year 1807, the commerce of Salem was at its height, having upwards of 43,000 tons of vessels. In the last quarter of that year, the duties on the vessels that arrived was much greater than in any other quarter. Two hundred and thirty-six vessels entered in that year from foreign countries, the duties on their cargoes being $1,152,000. Year 1805, duties $1,000,000. No year since 1807 have the duties amounted to $700,000.

	Vessels entered.	Duties secured.	
1790 to 1799.....	1,466	$2,490,412 55	
1800 to 1807.....	1,542	6,041,263 24	—8 years, average per year, $155,157 40.
1808 to 1817.....	936	3,785,799 80	
1818 to 1827.....	1,139	4,639,782 92	
1828 to 1834.....	704	2,925,615 50	
1839, Aug. to Dec....	55	13,200 45	
	5,842	$20,267,374 46	

5,842 vessels, average duties, $4,462 25—1807, 236 vessels entered, average duties, $4,887.

VESSELS ACTUALLY BELONGING TO SALEM AND BEVERLY JANUARY 1, 1809.

Ships.....	61	16,509	
Barks.....	12	2,182	
Brigs.....	53	7,950	
Schooners.....	40	3,729	
Sloops.....	1	58	
	— 167	——	30,624 tons registered.
Brigs.....	1		
Schooners.....	101		
Sloops.....	32		
	— 134	=	16,179 tons enrolled for coasting and the fisheries.
	301 vessels.		40,803 tons.

Tea entered in the United States from China in the year 1790.....lbs.		2,601,852
Salem, ship Astrea.....	320,502	
" " Light Horse.....	263,701	728,871
" Brig William & Henry.....	144,668	
All others.....		1,872,981

Salem, 28 per cent of the whole import.
In addition to the above, entered from Europe, 440,000 pounds.

THE MERCANTILE MARINE OF PRUSSIA.

It may not be uninteresting to give the following extract of the statistics of the Prussian mercantile marine, recently published by government, up to the 1st of January, 1848. It embraces the ports of Dantzic, Stettin, Stralsund, and Codin, including Swinemunnde. According to this report, these ports owned 952 sea-going vessels, including 20 steamers, having a total tonnage of about 25,000 tons, and employing 7,800 hands. The number of small craft, of five tons and less, amounted to 520, including five steamers, and employing 1,000 hands. The greater part of these vessels are now lying idle, or are detained, by fear of capture, in foreign ports.

COMMERCIAL REGULATIONS.

TARIFF OF ANTIGUA OF 1848.

ST. JOHNS, ANTIGUA, *September 13th*, 1848.

INTELLIGENCE that Her Majesty had sanctioned the undermentioned acts has been received at St. Johns:—

An act to repeal the imperial duties collected by the customs establishment.
An act to alter and amend the tariff act.
An act to repeal the tonnage duty act.

SCHEDULE OF DUTIES LEVIED UNDER THE NEW TARIFF.

Ale, beer, cider, perry, and porter, in bulk	ton	£1	10 0
" " " " " "	dozen quart bottles	0	0 9
Beef and pork, salted and cured	per bbl. of 200 lbs. nett	0	16 0
Bread and biscuit	cwt.	0	2 6
Butter		0	10 0
Candles, other than tallow	lb.	0	0 3
" tallow		0	0 1
Cheese	cwt.	0	8 0
Cigars	M.	0	10 0
Flour, wheat	per bbl. of 196 lbs.	0	5 0
Fruits, dried and preserved	lb.	0	0 2
Hams, bacon, dried beef, and tongues, pickled or dried	cwt.	0	8 0
Horses, mares, and geldings	head.	1	10 0
Lard	cwt.	0	5 0
Leather, sole	lb.	0	0 1
" upper of all sorts		0	0 2
Oil, namely, sperm, cocoa-nut, olive, rape, and neats foot	gall.	0	0 6
Peas, beans, barley, calavances, oats, corn, and all other grains	bush.	0	0 3
Rice	cwt.	0	1 0
Soap	lb.	0	0 ½
Spirits, brandy, and all other cordials	imp. gall.	0	4 0
Sugar, refined, in bond in the United Kingdom, not being of the growth of any of the British Possessions in America, or of the Mauritius, or any of the British Possessions within the limits of the East India Company's charter	lb.	0	0 6
Staves	M.	0	7 0
Tea, souchong, and all other black teas	lb.	0	0 3
" gunpowder, hyson, and all other green teas		0	0 6
Tobacco, leaf, unmanufactured		0	0 1
" manufactured		0	0 2
Wines, whether bottled or not, on every £100 value		15	0 0
Wood—pitch pine, for every 1,000 feet, superficial measure of an inch thick		0	10 0
White pine		0	6 0
Spruce		0	4 0
Shingles, cypress		0	4 0
" cedar, pine, and spruce		0	1 6
Wood hoops	M.	0	2 6

And after these rates for any greater or less quantity, on such goods respectively.

Carriages, furniture, jewelry, perfumery, artificial flowers, musical instruments, porcelain and China ware, gilt mouldings, paper hangings, clocks and watches, silver and plated ware, pyrotechnics, carpets, 10 per cent.

Articles composed of linen, cotton, and other materials, of which the invoice cost is less than 4½d. per yard, 2½ per cent

On all goods, wares, and merchandise not hereinbefore enumerated, except such as are comprised or referred to in the subjoined table of exemptions, an ad valorem duty of 5 per cent.

TABLE OF EXEMPTIONS.

Except the following which shall not be liable to any duty under this act—asses, personal baggage, printed books, bullion, coals, coin, gold, silver, and copper, cattle, and all other

live stock not hereinbefore enumerated, drugs and medicines, fish, namely, fresh, salted, dried, or pickled, fresh meat, fruit, not being dried or preserved, hay, implements of husbandry, ice, iron hoops, linseed meal or cake, meal, namely, barley, rye, oat, Indian, and buckwheat meal, mules, manures of all kinds, maps and charts, machinery and apparatus for mills, steam engines for manufacture of sugar, rum, or other produce, poultry, plants and shrubs, salt, seeds of all kinds, straw, turtles, temper lime, tiles, namely, roofing, draining, and paving, provisions and stores of every description imported or supplied for the use of Her Majesty's land and sea forces.

TARIFF AND TRADE OF MOROCCO.

The following is an extract from a private letter, addressed to the editor of the *Merchants' Magazine* by THOMAS HART HYATT, Esq., the United States Consul at Tangier, the Empire of Morocco. It embraces a piece of commercial intelligence that may be of interest to our merchants generally. The letter of Mr. Hyatt is dated "Consulate General of the United States, Tangier, Sept. 27, 1848."

"A Royal Order has been received at this place from the Government of Morocco, *reducing the duties on all goods imported into this Empire, from* 20 *down to* 10 *per cent ad valorem;* excepting upon the articles mentioned below, which are reduced as follows:—

On Iron, from $5 to $4 per cwt.

On Raw Cotton, to $3.

On Raw Silk, from $1 to 50 cents per lb.

"This radical reduction in the duties upon foreign goods coming into this country will, I hope, have the effect to cause enterprising commercial men of the United States to turn their attention hitherward, where a lucrative trade might be established upon a field now almost entirely unoccupied by American enterprise, while several other nations are reaping a rich harvest from their trade with this Empire."

INCREASE OF THE GERMAN ZOLLVEREIN DUTIES.

The Prussian government has, in the name of the Zollverein, published a decree imposing additional duties on foreign fabrics, which, although only provisional, and subject to the sanction of the other states, was enforced on ten days' notice, just on the eve of the great Leipsic fair, and is to continue in operation until the end of the year. We subjoin the principal features of the new measure:—

	Old duty.	Increase.
30 lbs.—Goods all silk.....per cwt.	$110 00	$110 00
30 c.—Goods composed partly of silk in connection with either woollen, cotton, or linen yarn.....	55 00	10 00
41 b.—White, three and more fold, woollen or mohair yarns, also dyed yarns.....	8 00	2 00
41 c 1.—Woollen or worsted goods, without silk, either all wool, or in combination with any other material, either fancy or printed.....	50 00	10 00
41 c 2.—Unfinished or plain.....	30 00	10 00
Single and doubled undyed yarn, with the exception of hard (English) combed yarns.....	00 50	9 50

REGULATIONS FOR THE CALIFORNIA AND OREGON MAILS.

The following extract from an official circular of the Postmaster General of the United States, dated Post-Office Department, Washington, September 16th, 1848, embraces all that is material to the public:—

"Mail bags will be made up at New York to be forwarded by said steamer for Rio Janeiro, Valparaiso, and Callao; also, for San Diego, Santa Barbara, Monterey, and San Francisco, in California, and Astoria, in Oregon. The inland and sea postage on all letters and newspapers, to be forwarded by said packet, for places not within the territory of the United States is to be *pre-paid* at the offices where mailed, and the postmasters concerned will see that this requisition is complied with, and will stamp the letter and papers accordingly. The mails to said foreign ports will be sent to the care of the United States consuls, at the respective places, under the seal of the New York post-office. The

ship postage for single letters, not exceeding half an ounce, will be 24 cents to Rio Janeiro, Valparaiso, or Callao; and for each newspaper, pamphlet, or price current, 3 cents. In each case the regular inland postage to New York is to be added. To Panama, each letter, as aforesaid, will be rated at 30 cents, and to San Diego, Santa Barbara, Monterey, San Francisco, or Astoria, 40 cents, without any addition for inland postage."

THE BRITISH DUTY ON MAGNESIA.

An inquiry having recently been instituted as to the liability to duty of magnesia imported from abroad, it having been customary, at one of the principal outports, to levy the *ad valorem* duty of 10 per cent thereon, in consequence of its having undergone various processes of calcining and mixing with other ingredients; and, therefore, no longer retaining the character of a simple drug. But as the article termed calcined magnesia is in public and general estimation considered to be a drug, and in fact largely dealt in by all druggists, it has become matter for consideration whether it should not be admissible free, under that general head in the tariff, as the table of duties does not define the description of drugs which shall be free from liability to duty or otherwise, neither that they shall be merely essences, or not a combination of different materials, or shall not be in a prepared state, but simply enumerated drugs, without reference to their actual character or qualities. For these reasons, and on the principle that all articles which are applicable to and intended for medicinal purposes, whether in their primitive state or having undergone a degree of manufacture, should be considered drugs, provided they are not actually mentioned in the tariff as being liable to duty under any particular rate, it has been considered that such was the intention of the legislature in repealing the duty on drugs, and that magnesia is such an article, and therefore admissible duty free. The question as to what constitutes a drug has frequently engaged the attention of the revenue authorities, when there was some doubt entertained whether articles which were not entirely and only applicable to medicinal purposes should be considered drugs; but no doubt existed as to those which were applicable to medicinal purposes being so classified. This decision, as it will govern future importations of this article, is of much interest and importance.

LANDING OF FOREIGN GOODS IN ENGLAND:

A REGULATION OF THE BRITISH BOARD OF CUSTOMS.

The revenue authorities have received a communication from Sir C. Trevelyan, one of the Secretaries of the Treasury, signifying that their lordships having had before them the report of the Board of Customs, representing that they are of opinion that it is expedient to adopt the following regulations for the better protection of the revenue with regard to the landing of foreign goods in this country, viz:—"That when any goods shall be unshipped or removed from any importing vessel for the purpose of being landed after due entry thereof, such goods shall thereupon be immediately removed to, and discharged at the wharf, quay, or other place at which the same are intended to be landed; and if such goods are not so removed, and on a requisition from the proper officers forthwith landed, the forfeiture and penalties imposed by the 13th sec. of the 8th and 9th Vic., cap. 86, will be incurred"—he, Sir Charles Trevelyan, was to acquaint the board that their lordships are pleased to approve of the adoption of this regulation, and to authorize the board to issue a notice of their intention to carry the same into effect.

BRITISH REGULATIONS OF SHIPS' STORES.

A matter of interest and importance has recently been under the consideration of the revenue authorities, with reference to the shipment of foreign flour from the bonded warehouse, duty free, as ships' stores. It arose on an application from a firm at one of the Scotch ports, to be permitted to ship as stores, duty free, some barrels of flour imported from Hamburgh, and deposited in the bonded warehouse, which was objected to by the local authorities of the department. The parties referred to an order issued by the commissioners in March, 1844, permitting biscuits and flour in bond to be repacked for stores, but subject to certain restrictions. The question for consideration was, whether the board was empowered to permit the shipment of flour imported from foreign parts for ships' stores, duty free, or simply flour deposited in the warehouse under the Grinding Act, being either flour manufactured from foreign wheat in the United Kingdom, or foreign flour which had paid the duty, and been cleared for home use. The 19th section of the General Warehousing Act permits the shipment as stores of all warehoused goods under such

regulations as the board may direct and appoint, in consequence of which there is not any legal objection to the shipment of any foreign flour or biscuit as stores from the bonding warehouse, under the usual regulations, free of duty, although it has not been usual to grant the privilege of the free shipment of foreign manufactured flour for the purpose; but, under the circumstances detailed, permission was given by the revenue authorities for a compliance with the request.

DRAWBACK ON FOREIGN SUGAR.

Treasury Department, September 29th, 1848.

As the 14th section of the Tariff Act of 30th August, 1842, enacts that the drawback to be allowed upon the exportation of foreign sugar refined in the United States, shall be *equal in amount* to the duty that was paid on the foreign sugar from which the refined was manufactured, and no more, to be ascertained under such regulations as shall be prescribed by the Secretary of the Treasury; and it being found upon due investigation of the subject, that the drawback of "two cents and one-sixth of a cent," authorized by the circular instructions of the 17th of February, 1847, is greater in amount than the duty paid on foreign sugar from which the refined is now being and hereafter may be manufactured, owing to a reduction in the foreign market value, on which the import duty of 30 per cent is assessed under the Tariff Act of 30th July, 1846, it becomes proper further to regulate the matter in conformity with the law.

The drawback hereafter to be allowed on due exportation of foreign sugar refined in the United States, imported since the first day of January, 1848, under the present tariff, if exported within three years next preceding the day of importation, is fixed at one cent and one-half cent (1½) per pound, subject to the deduction from said drawback of two and one-half per cent, prescribed by the 15th section of the Tariff Act of August 30th, 1841; *provided always*, that the exporter of such refined sugar, shall by his own affidavit and other evidence, prove to the satisfaction of the collector receiving the export entry of said refined sugar for the benefit of drawback, that the foreign sugar from which the same shall have been manufactured, was imported since the first day of January, 1848.

M'Clintock Young,
Acting Secretary of the Treasury.

IMPORTATION OF CATTLE IN ENGLAND.

The *London Gazette* contains an order in council, giving directions for bringing into operation the act of the last session to prohibit the importation of sheep, cattle, or other animals, for the purpose of preventing the introduction of contagious or infectious disorders; and it further enacts, that if any sheep or lambs imported or brought into this country appear at the time of their importation to be infected with or laboring under the variola ovina, or sheep pox, such sheep and lambs, and all other sheep and lambs imported and brought into this country in the same ship or vessel with any sheep or lambs which appear to be diseased, shall be seized and detained by the officers of customs at the port of import; it enacts also that the circumstances of such seizure shall be forthwith reported by such officers to the British Commissioners of Customs and the Board of Trade; and if it be certified to the former board by any veterinary surgeon appointed by them to inspect such sheep, that they are infected with such disease, that they may, if they think proper, cause such sheep or lambs to be forthwith destroyed. Directions also may be given for further detaining or destroying all or any other of the sheep or lambs which may have been imported into this country with the diseased animals, or for returning them to their owners, subject to any conditions which may be prescribed, and on the payment of any expenses incurred by the Commissioners of Customs in respect of their detention.

REMOVAL OF GOODS UNDER BOND IN ENGLAND.

The revenue authorities having received application from certain merchants in Dublin, requesting that the privileges now allowed with respect to the removal of tobacco and other goods under bond, from one port to another, without the same being re-weighed on arrival, may be extended to coffee and cocoa shell, they have, on consideration of the matter, directed that coffee and cocoa shell may be allowed to be removed without being re-weighed, subject to the regulations in force on the removal of other articles in the same manner, and an intimation to that effect has been given to the principal officers of the customs department in London, and the collectors and comptrollers of the several outports throughout the United Kingdom for their information and future government in the matter.

NAUTICAL INTELLIGENCE.

THE BUTTERMILK CHANNEL, ETC.

To FREEMAN HUNT, ESQ., *Editor of the Merchants' Magazine.*

DEAR SIR:—I hand you herewith the copy of a report made by Lieut. Com. David D. Porter to Hon. R. J. Walker, Secretary of the Treasury, in relation to Buttermilk Channel, which I received on the 7th instant from Professor A. D. Bache, Superintendent of the Coast Survey. I have been informed by Jonathan Goodhue, Esq., of the commercial house of Messrs. Goodhue & Co., of New York, that in June, 1776, General Washington in one of his letters to Congress stated that a British ship of war, of large class, had passed through Buttermilk Channel that month. The harbor of New York is approached from the ocean through three channels, viz: between the Battery and Governor's Island—in this channel is Diamond Reef; Buttermilk Channel, between Governor's Island and the Atlantic Dock; near this, but within the harbor of New York, is Prince's Reef; and Hurl Gate channel, through Long Island Sound. This last channel is very dangerous. An application will be made to Congress at the session soon to commence, for an appropriation to remove the rocks in Hurl Gate channel, and also Diamond and Prince's Reefs. The whole expense will not exceed one hundred thousand dollars, as estimated by Lieut. Com. Porter, of the U. S. Navy. In relation to his survey of Hurl Gate and its vicinity, I have received the following letter:—

OFFICE OF SUPT. OF COAST SURVEY, *Nov. 2d*, 1848.

Sir:—In compliance with your request, I herewith send a copy of Lieut. Com. Porter's report on Buttermilk Channel, and have requested him to furnish you such information as you may desire for immediate use, in anticipation of his report not yet received, on the soundings in Hurl Gate and its vicinity. Your application being addressed to the Secretary of the Navy, instead of the Secretary of the Treasury, or to the Supt. of the Coast Survey, has produced some delay. I hope, however, you may receive in time what you desire for present use, and will forward to you Lieut. Com. Porter's report when received, and, if desired, a tracing of his new soundings. Yours respectfully,

A. D. BACHE,
Supt. U. S. Coast Survey.

To EBEN. MERIAM, ESQ., *New York.*

NEW YORK, SEPTEMBER 5TH, 1848.

DEAR SIR:—As you seemed to be anxious about the result of the examination of Buttermilk Channel, I hasten to inform you that I have finished the survey, and that the representations which have been made to you about the difficulties of the channel, are incorrect. As I expected, it has in some places deepened, and in every place there is water enough for the largest ship in the world. There is no difficulty in entering the channel, even without a pilot; it is perfectly straight, and a buoy on each side will be sufficient to take any one in. I have been very much struck with the advantages of the present location of the warehouses over every other, both in point of economy to the government and to individuals. A vessel can come direct from sea, discharge her cargo without an hour's delay, and take in another. If a vessel had to discharge on the New York side, she would likely be obliged to wait a week before she could get into the docks, owing to their crowded state. Vessels loaded with grain discharge with great ease at the present location, owing to the facility with which Pafin's elevator can be used, and can at any moment be loaded again with the same ease. The saving in insurance on property stored in the warehouses, I am told, will be one-quarter of what it would be if stored in the city of New York. The water close to the docks is deep enough for any sized vessel, and the increased velocity of the current, owing to the channel's being contracted by the docks, has a tendency to make it still deeper. I shall finish the chart immediately and send it to you through the Superintendent of the Coast Survey. The interior of the dock is yet undergoing great changes, and I find it difficult to make a very minute survey of it. Vessels of the heaviest draft go inside, but it will at present contain only thirty or forty with convenience. When finished, it will be one of the most desirable harbors I know of in

any part of the world. I have, while employed in this matter, taken notice of the ferry-boat which runs from the Atlantic Dock to New York. I should say she offers every facility for the transportation of goods to the opposite side, coming and going constantly, and never to appearance so much crowded with goods, carts, &c., that more could not be put on board without the least inconvenience.

In conclusion, I would say that on the inside of the docks and in Buttermilk Channel, there is room enough for nearly all the vessels that sail out of New York to lie at anchor in perfect safety. I remain, very respectfully, your obedient servant,

DAVID D. PORTER,
Lieut. Com. U. S. schooner Petrel.

HON. R. J. WALKER, *Secretary of the Treasury.*

BUTTERMILK CHANNEL SEVENTY-TWO YEARS AGO.

"DEAR SIR:—At foot I hand you the extract which I mentioned to you from WASHINGTON'S correspondence, in which he speaks of a British ship of war passing Buttermilk Channel. I am, dear Sir, yours truly, J. GOODHUE."

"EXTRACT."—"New York, September 4, 1776. On Monday night a 40 gun ship passed up the Sound between Governor's and Long Island. In her passage she received a discharge of cannon from our batteries, but without any damage, and having a favorable wind and tide soon got out of their reach."

As soon as I receive a copy of Lieut. Com. Porter's report of his survey of Hurl Gate and its vicinity, I will send it to you for publication, together with the report made by Lieut. Davis in 1847–8, of the same strait. Yours very respectfully,

November 15th, 1848. EBEN. MERIAM.

LIGHTS AND LIGHT-HOUSES ON THE COAST OF FRANCE.

CONSULATE-GENERAL DE FRANCE, *Aux Etats Unis*,
NEW YORK, *November* 1, 1848.

TO FREEMAN HUNT, ESQ., *Editor of the Merchants' Magazine.*

DEAR SIR:—The Consul-General of France has received from the Navy Department of France a *Notice to Navigators* (of which I enclose a copy) about five new Light-houses erected on the coast of the *Department du Finistere*, to be lighted every night from the 15th of October, 1848. This notice being very important to ships bound from here to France, I hope you will insert it in the next first number of your interesting publication.

Respectfully, Sir, your obedient servant, L. BORG.

MINISTRY OF PUBLIC WORKS, *August*, 1848.

Notice is hereby given to navigators, that from and after the 15th of October, 1848, five new Lights were lighted on the north and north-west coast of France,—one at Calais, and the others on the shore of the Department of Finistere.

The position and character of these Lights, and the distance at which they are visible, are as follows:—

NEW LIGHT OF CALAIS.—Light changing every 4 minutes showing flashes, preceded and followed by short eclipses. From and after the 15th October next, the old eclipse Light of the tower of the city will be taken away. Instead of it a new Light will be established, changing every four minutes and showing a blaze, preceded and followed by short eclipses. The distance of the new Light from the old one is about 1,300 feet. It will be placed upon a tower lately built in one of the entrenchments of the fortification which surrounds the city, in latitude 50° 57′ 45″ N., longitude 0° 29′ 2″, W. from Paris.

Elevation above the ground, 167 feet; above high water, 190 feet; visible 24 miles.

In ordinary times, the eclipses will only appear total at a distance of twelve marine miles and upwards.

To provide against mistakes which may arise from the number of Lights on this coast, we give the characters of those in the neighborhood of Calais.

Ostend, a Fixed Light; Dunkirk, eclipses every minute; Gravelines, a Fixed Light; Calais, (new,) varied by bright light every 4 minutes; Grinez, eclipses every half-minute; Cayeux, (entrance of the Bay of the Somme,) varied by bright light every 4 minutes.

DEPARTMENT OF FINISTERE.

I. *Two Lights at the Mouth of the Odet.*—1st. A Light on the *Point du Coq*, left bank of the Odet.

Fixed Red Light.

Latitude 47° 52′ 20″ N. Longitude 6° 26′ 58″ W. from Paris.

Elevation above the ground, 31 feet; above the sea, 34 feet; visible 11 miles.

2d. Light about 870 feet to the N. 14° W.

Fixed White Light.

Elevation above the ground, 31 feet; above the sea, 58 feet; visible 11 miles.

The above two Lights kept in range indicate the direction of the great channel of the mouth of the Odet.

II. *Two Fixed Lights of the Harbor of Concarneau.*—1st. Light in the battery of *La Croix* at Concarneau.

Latitude 47° 52′ 11″ N. Longitude 6° 15′ 21″ W. from Paris.

Elevation above the ground, 31 feet; above the sea, 46 feet; visible 11 miles.

2d. Light between Concarneau and Benzec, 6,155 feet N. 28° E. from the first.

Elevation above the ground, 31 feet; above the sea, 178 feet; visible 14 miles.

These two Lights kept in range indicate to navigators the course to take in order to enter the little roads of Concarneau, avoiding on the west the banks of Lue Vras and the neighboring shoals, and on the east the banks of Cochon, Barzic, and Men-Fall. This course passes very near the bank of Cochon.

FLOATING LIGHTS IN THE PRINCE'S CHANNEL.

Two Floating Light Vessels have been moored near the East Tongue and Girdler Sands in the Prince's Channel, in the following positions:—

The "Tongue" Light Vessel is placed in 5½ fathoms at low water spring tides, three cables' lengths to the eastward of the East Tongue Buoy, and with the following compass bearings:—

North-east Spit Buoy of Margate Sand.....S. E. ¼ S.
Tongue Beacon.....W. by N. ½ N.
North-east Tongue Buoy.....W. N. W. ¼ N.
Shingles' Beacon.....N. W. ¼ N.

The "Girdler" Light Vessel is moored in 3½ fathoms at low water spring tides, one-half cable's length to the southward of the Girdler Buoy, with the following marks and compass bearings:—

The Eastern Preventive Station at St. Nicholas, its apparent width open to the westward of the west end of Cleve Wood.....S. S. E. ¼ E.
The Girdler and Shingles' Beacon in line.....E. S. E., Easterly.
South Girdler Buoy.....E. by S. ½ S.
North Pansand Buoy.....S. S. E. ¼ E.
West Pansand Buoy.....S. by E. ¼ E.
Shivering Sand Buoy.....N. N. W.

Mariners are to observe that on board these vessels Lights, as hereinafter described, will be first exhibited on the evening of the 1st of October next, and thenceforth continued every night from sunset to sunrise, viz:—

At the East Tongue—Two Fixed Lights, one of which, at the masthead, will be White; the other will be shown at a lower elevation, and colored Red.

At the Girdler—One Bright Revolving Light will be exhibited.

Note.—The East Tongue and Girdler Buoys remain at their stations for the present, but will be taken away and discontinued after a short time.

REGULATIONS FOR VESSELS ANCHORING NEAR GIBRALTAR.

GIBRALTAR, *September 13th*, 1848.

His Excellency, the Governor, has received the subjoined official communication from the competent authority at Algeciras.

By the roadstead of "Tunara" is meant the Spanish Beach, about two miles behind the Rock; where, sometimes, during a long westerly wind, from fifty to one hundred square-rigged vessels come to anchor, being unable to pass the Straits.

That of "Getares" is commonly known by "Sandy Bay," between Algeciras and Point Carnero. It is certainly a safe anchorage for vessels unable to pass the Straits, being the

weather side of the bay during westerly winds. Masters of vessels in quarantine must be very guarded, however, not to infringe the sanitary laws and regulations of Algeciras, or they will be subjected to very heavy fines, such as were inflicted some months ago on the barques Hope and Amana.

"As it is a very great abuse on the part of all classes of vessels, whether national or foreign, to anchor on any part of the coast under pretext of contrary winds, thus infringing the existing laws, particularly the Sanitary, by giving rise to repeated complaints by irregularities, and as I am determined not to permit that abuse in the maritime district under my command, by which danger to the public health might accrue, and upon which subject the Provincial Board of Health of this district has communicated to me the course it considers the most advisable to be pursued. I have, therefore, instructed the commandant of the coast guard of this station to warn the commanders of the vessels of the division under his orders to cruize to the eastward of Gibraltar, and not to permit, upon any consideration, vessels to anchor in the roadsteads of Tunara or Getares, or on any part of the coast.

"Thus vessels, prevented by contrary winds from fetching this anchorage or that of Gibraltar, may put into some authorized port to the eastward, where proper surveillance will be exercised by the established authorities, or their assistants, whereby all danger to the public health will be avoided."

NEW LIFE BOAT INVENTED.

The *London Morning Chronicle* furnishes a description of a valuable improvement in the construction of Life Boats, just perfected by Captain J. Keyse, by which the buoyancy of vessels of this description has been increased to an extraordinary degree. The model-boat, built under the direction of Captain Keyse, at Walworth, is only 26 feet in length, but it is calculated that it will carry 4½ tons. By means of what is technically called a "watercourse," introduced just below the watermark, it is rendered perfectly impossible to upset the bark, upon the safety of which so many lives frequently depend. Another inimitable contrivance which Captain Keyse has introduced, enables the generous-hearted sailors who peril their lives for the salvation of the shipwrecked, to lower the mast on nearing a rock, for a landing bridge; and its efficiency in this respect is increased tenfold, by its being removable upon a swivel to either end of the life-boat. The model-boat, which has received the approval of the British Admiralty, has been removed to Woolwich for trial. Captain Keyse is also the inventor of a floating line, which is calculated to be the means of saving many valuable lives in cases of shipwreck, and it is anticipated will prove wonderfully serviceable in enabling an army advancing into an enemy's country to establish the communication across rivers necessary for the construction of pontoon bridges and other purposes.

CHRISTMAS ISLAND.

Christmas Island is little else than a sand bank, bounded by a coral reef, which makes off about half a cable's length from the shore and surrounds the island, with the exception of the south-west point, where the surf makes to the beach. It lies in lat. 2° North, and long. 157° 30′ West. It is about 80 miles in circumference. The eastern point lies in long. 158° 40′ West, and lat. 1° 45′ North. The island is low, and cannot be seen at a distance of more than 16 miles in a clear day. The north-east side of the island forms a deep bay, with a strong current setting in shore, and it is necessary to avoid getting embayed here. There is safe anchorage for ships on the west side, opposite the entrance to the lagoon, with soundings say from 10 to 30 fathoms. The English whale ship Briton was wrecked on this island October 10th, 1836, and lately the Chilean ship Maria Helena, and Bremen whale ship Mozart.

WRECK IN HOLLESLEY BAY.

A Green Buoy, marked "Wreck," has been laid about 18 fathoms to the westward of a schooner sunk in the Western entrance to Hollesley Bay. The Buoy lies in 3½ fathoms at low water spring tides, with the following marks and compass bearings:—

The second Westernmost Tower at East-Lane, its width open of two remarkable poplar trees.....N. W. by W.
Baudsey Church.....W. N. W.
Orford High Light-house.....N. E. by E. ½ E.

RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

THE RAILROAD SYSTEM SUGGESTED.

In the *Merchants' Magazine* for March, 1846, (vol. xiv., pages 249–260,) we published an interesting article entitled, "First application of Steam to Railways," furnished by J. E. Bloomfield, Esq., of New Jersey. By reference to that article it will be seen that, as far back as 1809, Col. John Stevens, of Hoboken, was the first individual in this country who conceived and defined the proportions of the locomotive, and compared "the superior capacity and advantages of a railway with those of a canal." He even predicted that steam carriages would be propelled at the rate of 40 miles per hour; a prediction which has been fulfilled on the best English railroads. A late London paper attributes the honor of suggesting the "Railway system" to Sir Richard Phillips, as will be seen by the following extract:—

A striking suggestion of the extension of railway communication into a "system," as connecting lines are now called, will be found in Sir Richard Phillips' "Morning's Walk from London to Kew," published in 1813. On reaching the Surrey Iron Railway, at Wandsworth, Sir Richard records: "I found renewed delight in witnessing at this place the economy of horse labor on the iron railway; yet a heavy sigh escaped me as I thought of the inconceivable millions which have been spent about Malta, four or five of which might have been the means of extending double lines of iron railway from London to Edinburgh, Glasgow, Holyhead, Milford, Falmouth, Yarmouth, Dover and Portsmouth! A reward of a single thousand would have supplied coaches and other vehicles, of various degrees of speed, with the best tackle for readily turning out; and we might, ere this, have witnessed our mail coaches running at the rate of ten miles an hour, drawn by a single horse, or impelled fifteen miles an hour by Blenkinsop's steam-engine. Such would have been a legitimate motive for over-stepping the income of a nation; and the completion of so great and useful a work would have afforded rational ground for public triumph in general jubilees!" The writer of these penetrative remarks lived until 1840; so that he had the gratification of witnessing a triumph akin to his long-cherished hope.

BRITISH RAILROAD STATISTICS.

A paper by Mr. W. Harding, Manager of the Glasgow and Greenock Railway, was read at the last meeting of the British Association for the advancement of science, which affords some interesting particulars of the working of the railway system. It appears by his statements that in 1842 the average receipts per mile were £2,489, and in 1847, £2,596; that the length of railway open in Great Britain, including Wales, was in the former year 1,990 miles, and the gross receipts of traffic, £4,740,000; whereas in 1847, the miles open were 3,597, and the gross amount of traffic, £8,366,772. The receipts, therefore, were about doubled, upon a less proportionate amount of mileage, a circumstance which would tend to give confidence as regards the prospect for the great additional lengths of railway, for which acts have been passed. The length of railway sanctioned by Parliament, up to the beginning of the present year, but not opened, was 7,150 miles, a considerable portion of which is in more or less rapid progress. On the 1st of May, 1847, 5,209 miles were in progress, on which 215,792 persons were at work. It is calculated that within the next five years there will be upwards of ten thousand miles of railway open in Great Britain, which will give permanent employment at good wages to upwards of 140,000 persons, representing about 720,000 of gross population, taking five to a family. When it is considered that there are about 4,000 miles of canals, and about 30,000 miles of turnpike road in the kingdom, this 10,000 miles of railway in addition is an accession of vast importance to our internal communication. Mr. Harding states the gross receipts of traffic on the railways for the year ending June 30, 1847, at £8,366,000, which includes £3,342,000 receipts for carriage, in round numbers, of 7,000,000 tons of merchandise and goods, 8,000,000 tons of coals, 500,000 horned cattle, 1,500,000 sheep, and 100,000 horses, besides mails, parcels, &c.; leaving for passenger traffic £5,024,000. The passenger traffic constitutes, therefore, about 60 per cent of the whole receipts. Since 1842, the proportion of receipts from other sources than passengers has increased by 11

per cent. The total number of passengers, by the returns of the Board of Trade, for the year ending June 30, 1847, was 47,484,134, and in 1842, 22,403,478. The average distance travelled by each passenger in 1842 was thirteen miles, and in 1847, sixteen miles. The classes of carriages used were in the following numbers and proportions:—

	1847.	1842.
First class	14.2	20.2 per cent.
Second class	38.3	45.4 "
Third class	47.5	34.4 "

The third class passengers increased from 6,000,000 in 1842 to 21,000,000 in 1847. In 1842 they formed about one-third, and in 1847 they were nearly half of the whole number travelling by railroad. The reduction of fares between the periods appears to have been 21.8 per cent on first class carriages, 23.8 on second class carriages, and 25 on third class carriages. The reduction of fares, coupled with the increased speed of travelling, may be considered as the chief cause of the increase of the number of passengers since 1842. It appears that the increase of third class passengers has been very different on different lines, reaching as high as 83.3, 79.5, and 72 3 per cent on some lines, down to 65.4 and 50.3 per cent on others; and on the Great Western it is as low as 14.6 per cent. The different characters and circumstances of the population in different localities will account, no doubt, in a considerable degree, for the state of the traffic, but there must be other causes operating to produce so marked a difference of result in the case of the Great Western. The results of the whole, as bearing on the question of traffic by the railways generally, is greatly in favor of a reduced system of fares, which is most satisfactory, as far as the public interests are concerned.

RAILWAY DIVIDENDS IN ENGLAND.

"*The Weekly Share List*," says the Chronicle, "gives the following tabular statement of the rates of dividend paid during the last four half years by ten of the principal railways:—

DIVIDENDS PER CENT PER ANNUM.

	1846.	1847.		1848.
	2d half.	1st.	2d.	1st.
Eastern counties	6¾	5	4	4
Great Western	8	8	7	7
Glasgow and Ayr	7	7	6	4
London and North-Western	10	9	8	7
" South-Western	9¾	9	8	6
Brighton	7	4	4	2½
Midland	7	7	7	6
South-Eastern	6.34	6.34	6.34	6.34
York and North Midland	10	10	10	8
York, Newcastle, and Berwick	9	9	9	8

The South-Eastern is, therefore, the only company which has maintained the same rate of dividend for the past four half years; and the Eastern Counties and Great Western the only two which have paid the same dividend for the 1st half of 1848 as for the 2d half of 1847.

RAILROAD TRACK SPRINKLER.

This is the name of a contrivance that has been patented by persons in Providence, R. I., for sprinkling railroad tracks. The Journal of that city states that "it has been applied to the trains of the Stonington Railroad, with results favorable far beyond the expectations of the projectors. A tank of 2,000 gallons has been found sufficient to sprinkle the whole track from Providence to Stonington, the train going at the rate of twenty miles an hour. The dust has been laid so effectually as to give no annoyance to passengers; the friction of the wheels on the rails has been greatly diminished; the bearing of the wheels and the journals have been much less worn, and such a thing as a "hot box" to a car has not been known, even at the greatest speed, since the sprinkler has been in use. The labor of cleaning the cars, and the wear upon them, have also been greatly diminished. The sprinkler is placed just behind the locomotive, so that while the locomotive is constantly traversing a dry and comparatively dusty track, the cars are going over a wet one."

RAILROADS AND BRANCHES IN THE UNITED STATES.

GENERAL STATEMENT SHOWING THE NUMBER OF RAILROADS AND BRANCHES IN THE UNITED STATES, THEIR TOTAL LENGTH, AND THE AVERAGES OF FARE PER MILE FOR FIRST AND SECOND CLASS AND WAY PASSAGE, AND FIRST AND SECOND CLASS FREIGHT PER TON PER MILE, (OMITTING THE CAMDEN AND AMBOY, THE CAMDEN AND AMBOY AND UNION TRANSPORTATION RAILROADS, AND THE BORDENTOWN AND TRENTON RAILROAD,) TAKEN FROM DOGGETT'S RAILROAD GUIDE FOR 1848.

	1.	2.	3.	4.	5.	6.	7.	8.
Maine	3	226¾	2 82	2 50	2 57	2 63	5 68	3 38
New Hampshire	2	99	3 00	3 00	2 62	2 87½	5 25	5 00
Vermont	1	33	3 00	3 00	3 00	3 00	4 00	4 00
Massachusetts	36	1,929½	2 43	1 66	2 71	2 27	5 47	4 54
Rhode Island	2	91¼	3 00	2 00	3 16	2 72	6 37	4 39
Connecticut	4	253¾	2 50	1 75	2 20	2 15	5 75	3 50
New York	20	798	3 17	1 50	3 75	2 81¾	9 04	5 79
New Jersey	4	155	4 00	3 33	3 54	3 62½	13 57	11 66
Pennsylvania	9	355	3 60	3 26	3 60	3 48¾	6 75	5 25
Maryland	9	661	3 45	3 45	3 58	3 49¼	4 56	3 12
Virginia	6	264½	4 74	2 38	4 72	3 94¾	10 44	4 69
North Carolina	2	248	4 23	4 23	4 00	4 15½	9 83	6 37
South Carolina	2	204	5 00	5 00	5 00	5 00	10 75	5 50
Georgia	5	602	4 14	4 14	4 70	4 32¾	9 33	4 78
Kentucky	1	28	4 46	4 46	4 46	4 46	9 00	9 00
Mississippi	2	70	5 35	5 35	6 00	5 56¾	24 39	17 30
Alabama	1	67	4 50	4 50	5 50	4 83½	16 83	8 00
Ohio	4	307	2 77	2 77	2 66	2 73½	6 60	4 62
Indiana	1	86	3 00	3 00	3 00	3 00	8 00	5 81
Michigan	3	241	3 00	3 00	3 32	3 10¾	8 44	6 50
Total	117	6,720	72 16	64 28	74 09	70 19	179 46	120 30
Averages			3 60	3 21	3 70	3 51	8 97	6 16

1. Number of railroads and branches. 2. Total length of miles. 3. First class per mile—average in cents and hundredths of a cent. 4. Second class per mile—average in cents and hundredths of a cent. 5. Way passage per mile—average in cents and hundredths of a cent. 6. Whole average of first and second class fares and way fares. 7. First class freight per ton per mile—average in cents and hundredths of a cent. 8. Second class freight per ton per mile—average in cents and hundredths of a cent.

It appears from the above table, from an average of all the railroads and branches in twenty different States, one hundred and seventeen in number, and six thousand seven hundred and twenty miles in length, that the average price of fare on them is three cents and fifty-one hundredths of a cent, or three and a half cents per mile.

OPENING AND CLOSING OF THE NEW YORK CANALS.

We give below a table showing the time of commencement and close of the navigable seasons of the State canals from 1824 to 1847:—

Years.	Opened.	Closed.	Days.	Years.	Opened.	Closed.	Days.
1824	April 30	Dec. 4	219	1837	April 20	Dec. 9	234
1825	" 13	" 5	238	1838	" 12	Nov. 25	228
1826	" 20	" 18	243	1839	" 20	Dec. 16	228
1827	" 22	" 18	241	1840	" 20	" 3	227
1828	Mar. 27	" 20	269	1841	" 26	Nov. 29	218
1829	May 2	" 17	230	1842	" 20	" 23	218
1830	April 20	" 17	242	1843	May 1	Dec. 1	214
1831	" 16	" 1	230	1844	April 18	Nov. 26	223
1832	" 25	" 21	241	1845	" 15	" 29	228
1833	" 19	" 12	238	1846	" 16	" 25	224
1834	" 17	" 12	240	1847	May 1	" 21	234
1835	" 15	Nov. 30	230	1848	" 1		
1836	" 25	" 26	216				

The river generally remains open from one to two weeks after the canal has closed, but it has frequently, within the past eighteen years, closed within a day or two of the canal, and in some instances on the same day.

The annexed table gives the day on which the Hudson closed at Albany for several years:—

1830	December 22	1839	December 18
1831	" 5	1840	" 5
1832	" 21	1841	" 16
1833	" 13	1842	November 28
1834	" 13	1843	December 10
1835	November 30	1844	" 17
1836	December 7	1845	" 3
1837	" 14	1846	" 15
1838	November 25	1847	" 24

STEAMBOATS IN THE UNITED STATES IN 1810.

The following paragraph, from an English paper of 1810, shows how far in the great improvement of steam navigation the United States was at that time ahead of all Europe, and how freely at that moment the British press admitted the fact, and recommended an imitation of the example:—

"They claim in America the honor of a most important discovery—'the art of navigating a vessel with a keel of 160 feet long so as to go by force of steam six miles an hour, without a sail, and against wind and tide.' The idea, however, has often been practically tried in England; and it is believed that the principal merit of the discovery in question is owing to a native of Scotland, born at the Carlton hill, in Edinburgh, where a number of ingenious mechanics reside—the son of one of whom, after living at Glasgow as an engineer, went some years ago to America, and having a mechanical turn, completed, with the assistance of an American gentleman, this important invention. Steamboats, as they are called, are already established on the Hudson, where the tide runs at the rate of six miles an hour; and in the Delaware, where it runs four miles; and it is soon to be extended to the Ohio and the Mississippi. In the New York steamboat there are four cabins, in which they can dine and lodge 100 people, and they travel with the same ease, and receive as much and as good accommodation as can be obtained on the best roads, and in the best regulated inns in Europe. The choicest wines are furnished, and the strictest order and decorum are kept up. They can go 200 or 300 miles in all sorts of weather within an hour of the regulated time. As his discovery has already been brought to such perfection in America, it were to be wished that a plan and description of these steamboats could be obtained, for they might be of use in our navigable rivers and canals, and on the Scotch and Irish lakes; in particular they might obviate some objections which have been made to navigation in Lochness, as a part of the Caledonian Canal. They might be the means of taking ships out of a harbor, and would thus render navigation more certain; and they might also be of service, if the system of iron railways were extended, by applying the same principles to the carriage travelling on them. Even in a military point of view advantages might be derived from the invention; for it might enable our troops to attack places which otherwise, owing to the wind and tide, they would not approach. On the Ganges and large rivers in the East, such boats might be of singular utility. It is to be hoped that these hints will attract the attention of some individual who may have it in his power to bring this important discovery from America to Europe."

INDIA RUBBER CAR SPRINGS.

D. K. Minor, Esq., the intelligent editor of the *American Railroad Journal*, has had an opportunity of riding in two railroad cars—one upon the Harlem road, and one upon the New Jersey road, from Jersey City to New Brunswick—fitted up with India rubber springs, and testifies to their ease and quietness. He says:—

"The difference between these cars and others on steel springs, in the same train, was manifest, especially when reading—and it appeared that, while in the cars with India rubber springs, the track was in much better *repair* than when in the other cars. The apparent difference arose from the greater elasticity of the rubber springs, which contin-

ued to yield as long as additional weight was applied, and to return on passing any inequality, however small. Of their comparative durability we cannot speak, though we see no reason to doubt their durability. This point will, however, be soon tested, as they are coming rapidly into use on several roads."

FOREIGN RAILROAD IRON.

The following is a list of the railroads which have been engaged in relaying their tracks with heavy rails during the past year, together with the quantity of iron which has been contracted for *in England* for that purpose:—

Syracuse and Utica..... tons	2,500	New Haven and Hartford.....tons	3,000
New York and New Haven.....	6,000	Concord and Portsmouth.....	4,000
Eastern.....	2,000	Lawrence	2,500
Boston and Worcester.....	4,000	Boston and Lowell.....	1,000
Western.....	5,000	Utica and Schenectady.....	2,000
Vermont Central.....	8,000	Tonawanda.....	2,000
Vermont and Massachusetts.....	4,000	Buffalo and Attica.....	4,000
Rutland.....	8,000	Ramapo.....	2,000
Old Colony.....	2,000	Somerville, (about,).....	2,000
Boston and Providence.....	1,000		
Stonington	1,000	Total.....	66,000

JOURNAL OF MINING AND MANUFACTURES.

THE FIRST AMERICAN MANUFACTORY.

BY GEORGE MOODY, M. D.

Byfield Factory was the first regular establishment of the kind in America. It was erected 1793, at the falls of Parker river, in Newbury, Byfield parish, on the site of the ancient Spencer Mill lot, which was conveyed by Spencer to Henry Sewall, who came from England, and it descended by inheritance to his posterity. Mr. Samuel Slater had, perhaps, a small spinning establishment previous, at Pawtucket, but the one at Byfield was the first regular factory. The machinery was made at Newburyport, by Messrs. Standring, Armstrong & Guppy. The company of stockholders consisted of William Bartlett, principal, Capt. William Johnson, Capt. Nicholas Johnson, Capt. Michael Hodges, Capt. Joseph Stanwood, Mark Fitz, a Mr. Currier, of Amesbury, Chief Justice Parsons, (then a lawyer in Newburyport,) Jonathan Greenleaf, Esq., James Prince, Esq., Abraham Wheelright, Phillip Coombs, and others, whose names are not now known to the writer.

It will be seen, then, that the history of this establishment is the commencement of all factory history in the United States. Of the individuals who were concerned in erecting the building, only two remain, Mr. Samuel Kimball, of Bradford, and Deacon Charles Foster, of Andover. Mr. David Poor, deceased, was master carpenter. The English operatives who started the establishment were Arthur Scofield, John Scofield, James Scofield, J. Lee, Mr. Aspenwall, Abraham Taylor, John Taylor, John Shaw, James Hall, principally from the towns of Oldham and Saddleworth, in England.

At first the establishment was entirely woollen; but, owing to the circumstance that the workmen manufactured the wool promiscuously, without sorting, into fine or coarse fabric, as best suited their fancy or convenience, it became unprofitable, and the stockholders gradually sold to one another till it all went into Mr. Bartlett's hands. He again sold it to Mr. John Lees, a native of Saddleworth, in Yorkshire, who carried on the manufacture of broadcloth and flannel till about the year 1806. Then the circumstance of Arkwright's invention gave a new impulse to the manufacturing business, and Mr. Lees went to England after cotton machinery. The exportation of this was forbidden by English law—the machinery was, therefore, packed in large casks and labeled "Hard Ware." Mr. Lees came in another vessel to prevent trouble by detection. The machinery was first set up in the large story over the grist mill, by two English machinists, John Hancock and James Mallelow, and over the door was placed a large placard with the inscription, "No admittance without leave."

This machinery consisted of drawing frames, and spinning frames, technically called mules throttles. This machinery was afterwards transferred to the third story of the fac-

tory building, where it was successfully worked for a number of years. The product consisted chiefly of cotton yarn, wicking, coarse ginghams, and sheeting. The cotton cloth was all woven at the factory by females. The price of sheeting at this time, covered with cotton burrs, was fifty cents per yard, and ginghams, perhaps seventy cents.

About this time (perhaps the year 1809) an event occurred which had like to have anticipated an invention in England. Dr. Joseph Richards, now of Claremont, N. H., then a student of Dr. Bricker, of Newburyport, and afterwards of Dr. Cogswell, of Atkinson, N. H., who took a medical degree at Dartmouth College, 1815, projected a power-loom to move by water. He went to Byfield, and made an attempt to set it up, but, owing to some defect in the machinery, it failed to work well. Perhaps if he had had more perseverance, he would have had the honor of inventing the power-loom in America, and the inventor himself realized a fortune. This brings down the history of cotton milling to the time of Dr. Cartwright in England, the true inventor of the power-loom. This, with the cotton gin, invented by Whitney, of New Haven, changed the condition of the cotton business entirely.

The Boston Chronicle for 1816, speaks thus of the cotton business at this time, and about the year 1815–16, the Boston Manufacturing Company was formed; Mr. Francis C. Lowell, having been previously in England, in 1812, and Mr. Boott likewise having resided in England. Mr. Lowell, whose penetrating mind had ascertained that the cotton business could successfully be engaged in the United States, made the attempt. It is, then, owing to the genius and application of Francis C. Lowell, aided by the talent and skill of his surviving relative and associate, Patrick T. Jackson, and by the mechanical science and ingenuity of that profound but unpretending mechanician, Mr. Paul Moody, that the country is indebted for the first establishment, which satisfied our most intelligent citizens that the business of cotton milling could be engaged in with safety and success.

Byfield Factory was carried on till about the year 1821, when Mr. Lees died, and at his decease it was sold. It was purchased by Gorham Parsons, Esq., and Major Paul Moody, of Lowell. It was thoroughly repaired and raised several feet; a new basement of stone being added, and the water course altered. It was subsequently worked by Mr. William Cleaveland a number of years. Afterwards it was again sold to Edmund Le Breton, Mr. Emery, Mr. Hale, and others. We understand this property has lately been purchased by Dr. Francis N. Noyes for a country residence. The scenery around this old river is wildly romantic, and beautiful and rich in historic legend.

MANUAL DEXTERITY IN MANUFACTURES.

The "body" of a hat (beaver) is generally made of one part of "red" wool, three parts Saxony, and eight parts rabbits' fur. The mixing or working up of these materials is an operation which depends very much on the dexterity of the workman, and years of long practice are required to render a man proficient. The wool and fur are laid on a bench, first separately and then together. The workman takes a machine somewhat like a large violin bow; this is suspended from the ceiling by the middle, a few inches above the bench. The workman, by means of a small piece of wood, causes the end of his "bow" to vibrate quickly against the particles of wool and fur. This operation continued for some time, effectually opens the clotted masses, and lays open all the fibres,—these flying upwards by the action of the string, are, by the manual and wonderful dexterity of the workman, caught in their descent in a peculiar manner, and laid in a soft layer of equable thickness. This operation, apparently so simple and easy to be effected, is in reality very difficult, and only to be learned by constant practice.

In type-founding, when the melted metal has been poured into the mould, the workman, by a peculiar turn of his hand, or rather jerk, causes the metal to be shaken into all the minute interstices of the mould.

In manufacturing imitative pearls, the glass bead forming the pearl has two holes in its exterior: the liquid made from a pearl-like powder, is inserted into the hollow of the bead by a tube, and by a peculiar twist of the hand, the single drop introduced is caused to spread itself over the whole surface of the interior, without superfluity or deficiency being occasioned.

In waxing the corks of blacking bottles much cleverness is displayed. The wax is melted in an open dish, and without brush, ladle, or other appliance, the workman waxes each cork neatly and expeditiously, simply by turning the bottle upside down, and dipping the cork into the melted wax. Practice has enabled the men to do this so neatly, that scarcely any wax is allowed to touch the bottle. Again, to turn the bottle to its proper position, without spilling any of the wax, is apparently an exceedingly simple matter; but

it is only by a peculiar movement of the wrist and hand, impossible to describe, and difficult to imitate, that it is properly effected. One man can seal one hundred in an hour!

In pasting and affixing the labels on the blacking-bottles, much dexterity is also displayed. As one man can paste as many labels as two can affix, groups of three are employed in this department. In pasting, the dexterity is shown by the final touch of the brush, which jerks the label off the heap, and which is caught in the left hand of the workman, and thrown aside. This is done so rapidly, that the three-fold operation of pasting, jerking, and laying aside, is repeated no less than two thousand times in an hour. The affixing of the labels is a very neat and dexterous operation; to the watchful spectator, the bottle is scarcely taken up in the hand, ere it is set down labelled. In packing the bottles into casks, much neatness is displayed.

The heads of certain kinds of pins are formed by a coil or two of fine wire placed at one end. This is cut off from a long coil fixed in a lathe; the workman cuts off one or two turns of the coil, guided entirely by his eye; and such is the manual dexterity displayed in the operation, that a workman will cut off 20,000 to 30,000 heads without making a single mistake as to the number of turns in each. An expert workman can fasten on from 10,000 to 15,000 of these heads in a day.

The pointing of pins and needles is done solely by hand. The workman holds thirty or forty pin lengths in his hand, spread open like a fan; and wonderful dexterity is shown in bringing each part to the stone, and presenting every point of its circumference to its grinding action. In finally "papering" needles for sale, the females employed can count and paper 3,000 in an hour!

MORALS OF MANUFACTURING TOWNS.

Until within a few years, the belief seems to have prevailed almost universally that manufacturing towns were necessarily doomed to moral degradation. The ignorance, corruption, and crime of the manufacturing districts of England were pointed to as indicating the unavoidable tendency of all such enterprises, and no doubt many persons in this country have dreaded the establishment of home manufactures, under the impression that the places where they might be located would become plague-spots, and high places of iniquity.

The actual experience and well-attested history of the principal manufacturing towns of the United States show a very different result from what many anticipated. It has been proved that such enterprises may be carried on successfully on the largest scale, not only without any deterioration in the morals and general intelligence of the operatives, but consistently with a system of means carried on at the same time for the improvement of the workers in virtue and intelligence.

For the evidence of this we might mention numerous manufacturing places in the United States, and quote from their history a large body of refreshing facts. But it may suffice to refer to Lowell, Massachusetts, the character of which place, and especially of its operatives, is generally known. And we say that here is an irresistible demonstration of the practicability of separating manufacturing enterprises from any special tendency to moral corruption and ignorance, and not only so, but of maintaining a high standard of moral and intellectual advancement.

We do not propose at this time to enter upon any detail of the system pursued by the managers of the Lowell factories. It is enough for our purpose to say that they have proceeded upon the simple, but often disregarded principle, that the usefulness, fidelity, and industry of any set of operatives will be in proportion to their intelligence and morals, and, therefore, if employers merely consult their own interest, they would take special care of the minds and moral characters of those in their service. We do not doubt that higher motives have had their influence with the Lowell proprietors, motives of benevolence and good will to the thousands in their mills, but we say, as a mere business calculation, it was a wise one, in the very outset of their enterprise to provide for a careful moral supervision, and guarantee ample sources of improvement for the minds under their control.

Under the operation of the wise and wholesome care and watchfulness which in Lowell and most of the New England manufacturing towns are brought to bear, results are achieved which strike the minds of Europeans as partaking of the marvellous and incredible. And it is a fact full of interest that there is probably not a town in the United States which enjoys a greater European celebrity than Lowell, nor is there one which foreigners of intelligence are more anxious to visit when they arrive on our shores.

At the same time the training which the operatives in such places receive qualifies them far better than any merely theoretical school for eminent enterprise and usefulness in fu-

ture life. Thousands of young women who leave the parental roof to spend one, two, or three years in the factories, return to their homes or enter upon married life with enlarged views, with a knowledge of the world, and with a self-relying and enterprising spirit, which enables them to maintain an elevated position and a commanding influence through life.

The manufacturing interest is destined to increase and multiply to a vast extent in this country. We trust it will be considered and understood also, that the true and only wise policy is to adhere faithfully to the Lowell plan of making every manufacturing neighborhood a school of sound morals and intelligence, as a means of success as well as a measure of benevolence. The manufacturers who have led the way are worthy of all honor and are sure of their reward.

ORIGIN OF DAY AND MARTIN'S BLACKING.

A late London paper furnishes the following curious history of Day and Martin's Blacking, by the manufacture of which, the late Mr. Day amassed nearly £500,000. It will be read with interest:—

"Mr. Martin was a native of Doncaster, and served his apprenticeship to a barber at Gainsborough, which place he quitted for the great metropolis, where he became a journeyman to the father of Mr. Charles Day, his late partner, and who carried on business some fifty or sixty years since as a perfumer, in Tavistock-street, Covent Garden. Mr. C. Day was also a *friseur*, but born in London, and they both cut their way for a few years over the heads of their superiors, till the following circumstance happened:—

"Doncaster races have always been attractive, and Mr. Martin resolved to visit not only this scene of sport, but all his relatives. He accordingly arrived there, and sojourned at the house of his brother-in-law, Mr. Anthony Moore, who kept the Kings Arms, in Sepulchre-gate. At the same house a soldier was quartered, named Thomas Florry, who was a servant to Captain Wilson, then on the recruiting service in that town; the beautiful polish of Florry's shoes caused the landlord not only to admire them, but eventually to obtain the blacking recipe for a quart of ale, which was readily granted. This valuable document, as it afterwards proved to be, was presented to young Martin on his return to London, and hence the magnificent edifice, No. 97 High Holborn, and its valuable appurtenances. The 'black diamond' receipt was proffered to young Mr. Day, he having more of the 'ready' than Mr. Martin, and soon after commenced business in a small way. Schemes, of course, were easily resorted to, in the absence of 'puffs,' prosaical and poetical, to bring this *shining* liquid into notice, and among them, the following:—'Nearly one hundred suits of let-off liveries were purchased in the purlieus of Petticoat Lane, London, and having engaged as many bodies as suits, they were despatched alternately to all parts of London to inquire for Day & Martin's blacking.' The trick told; an article so much in request must be valuable, and the perfumers, oil men, grocers, &c., soon laid in a stock, and thus laid the foundation for an immense fortune. All went on prosperously for many years; nothing *went down* but 'Day & Martin,' and they got up as rapidly, till at length Day, who originally had 'de monish,' made a proffer that himself or Martin should quit the concern on the receipt of £10,000. Martin being minus that sum, thought it advisable to accept, and he accordingly withdrew on a handsome income, which amounted to nearly £1,000 per annum. He built two houses at Doncaster, in one of which he resided for some time, and then removed with his family to Sheffield or its neighborhood, where he expired. The poor soldier has been dead many years, but his only reward was a quart of ale."

ANTI-PUTRID DISINFECTING AGENT.

Dr. Lewis Feuchtwanger, a skillful chemist of New York, has invented a new disinfecting agent for purifying and ventilating ships, hospitals, prisons, sick rooms, sinks, cispools, &c., which we understand has been tested in most of the hospitals in New York, as well as in the prisons, hotels, and other public places, and "everywhere," we are assured, "with the most decided and unqualified approbation," as may be seen by reference to certificates which Dr. F. has received from Bellevue, Emigrant and Quarantine Hospitals, Coroner, City Prisons, Astor House, and from eminent chemists, as Drs. Chilton, Reese, Geer, Ball, Doane, &c., which have been published in a pamphlet form.

ANCIENT MINING ON LAKE SUPERIOR.

The last Lake Superior News gives a further account of the discovery of evidences of the working of the copper mines of that region by a people now extinct, a notice of which was published some time since. It says that the indication which led to the discovery is a sunken trench upon the line of vein, which, being drifted into, disclosed a mass of native copper lying in this vein estimated to weigh about seven tons. The remains of large timbers were found by which this had evidently been propped, and beneath it were several cart loads of ashes and cinders, showing that the miners had endeavored to reduce the mass by fire. Several of the implements used in the mining operations were found, consisting of stone hammers, a chisel, and a gad of copper. The perfect state of the point of the latter would seem to indicate a process of hardening the metal was known, for the hammer end was most battered. With the copper of this were some large particles of silver. The chisel is ingeniously constructed so as to admit a handle. No iron instrument was discovered. That the mining operations were conducted to a greater extent than is practised by any existing tribe of Indians is apparent from the fact that the trench sunk upon the vein extends more than a mile in length. The accumulation of earth in the trench concealed the depth of the workings, except in the small part re-opened; but here the depth was found to be twenty feet, and the width of eight feet. Similar trenches exist in the neighborhood, which were traced for several miles.

Not the least interesting part of the discovery is the evidence of the great antiquity of the workings. Large trees were growing upon the earth that had accumulated in the diggings—one of which, directly over the large mass of copper, proved to be four hundred years old! Beneath it were trunks of trees that had previously decayed or fallen in, and the whole depth of soil that, by the process of time, had accumulated upon this antique furnace was eighteen feet.

This mine is about four miles east of the large mass of copper, which was removed from its place some years since, and is now in the National Cabinet at Washington.

These mementoes of ancient aboriginal industry are deserving of more than a mere passing notice. They may be considered as adding to the proof that, long before the discovery of America, a race existed on this continent among whom the arts had reached a higher grade than with the wandering tribes that have succeeded. The Indians now living in this region know nothing of the people by whom, or the time when, these operations were undertaken. They evince a concerted effort which does not characterize their present feeble effort in the art. It is somewhat singular that among a people so observant and persevering the use of iron remained so wholly unknown, since some of the ores which exist in vast abundance, and upon the surface in the Carp River region, are found to be easily reduced to a valuable steel by the heat of a common forge. A knowledge of the use of iron might have changed the destiny of that people, as it may be said to have done that race who now triumph, in the pride of art and power over their almost perished memorials.

ARTIFICIAL MINERALS AND PRECIOUS STONES.

A process has been explained to the Paris Academy of Sciences, and a patent obtained for it, whereby *artificial stone* of every quality may be produced, from artificial granite to statuary marble.

This invention is, it is said, from its cheapness, a great advantage for all the purposes of architectural decoration, and from its plastic nature before it becomes hard, of great service to sculptors in taking casts of statuettes, busts, &c., and even of figures of the size of life. The cost, in all cases where carving is required in stone, in which this composition is substituted, is less by nine-tenths. The invention is founded on the chemical analysis of the natural varieties of stone, and the manufacture is capable of such modifications as are requisite to produce all the varieties—"stones manufactured to order."

The artificial stone produced is less absorbent than natural stone, and is superior in compactness of texture, and will resist frost, damp, and the chemical acids. It is made of flints, and siliceous grit, sand, &c., rendered fluid by heat, and poured into moulds, as required, till cool and hardened. Its strength and solidity enable it to resist more blows than real stone.

Specimens of the invention have been forwarded to London, and their appearance is pronounced exceedingly curious. They consist of many varieties, some being plain pieces of coping-stones for variegated pavements for halls and rooms, stone ornaments, such as mouldings for friezes, finials, and some more elaborate, having flowers and devices apparently cut with a chisel.

A NEW PROCESS FOR PRESERVING BREADSTUFFS.

Several notices of this invention have appeared in the eastern papers, all of them speaking highly of the invention. We have deferred any extended notice of it, until its merits should be to some extent tested. Mr. E. W. Andrews, of the Empire Mills, in this town, has had one of these machines in operation about one year, upon corn meal. About fifteen hundred barrels of this meal, manufactured last spring, was shipped for Europe. It not only performed the voyage of the lakes, canals, and rivers of our own country, but, after remaining during some of the hottest months in store, it was sold in Liverpool for from 3s. to 3s. 6d. sterling per barrel more than the current quotations of the market for corn meal. The enhanced price is understood to have been realized in consequence of the superiority of this process of expelling the moisture, over all others; meal prepared by this process being devoid of any other taste or smell than that which pertains to the natural meal. Heretofore it has been deemed necessary to destroy the germinating principles of grain, to enable it to withstand the vicissitudes of climate, and hence the parched, ill-flavored meal that is usually sent abroad. Being divested of much of its nutrition, it is rendered unfit for the use of man. Mr. Stafford's theory is, that without the presence of moisture, nothing in nature can change. Upon this theory is his machine made to operate. It is simplicity itself. A cylinder, armed with flanches on the exterior, is made to revolve in a trough—the inclination of the cylinder and trough moves the substance to be dried gradually to the opposite side from which it was received. The interior of the cylinder is heated by steam. By this simple process, Mr. Stafford is enabled to obtain all that is requisite for preserving grain, flour, meal, &c., for an indefinite time. The heat is uniform, the motion of the article drying is constant, and the ventilation perfect.

So far as we are able to judge of this invention, from the tests already made of its utility, we are inclined to regard it of very great importance, particularly to the grain-growing regions of the West. The amount saved to the government would be large if they would supply the ships of the navy with flour and meal sufficient for a long voyage, with a perfect assurance that they would remain good for any length of time. So of whale ships, &c. Mr. Stafford richly deserves not only the large pecuniary benefit which is already made sure to him, but also the gratitude of the world.

The Cleveland Herald says:—"Flour from Ohio, wheat dried by Mr. Stafford's process, loses 8 per cent of its weight." This fact has been recently tested in Elyria. When, therefore, dried flour is exported, the miller will save transportation upon 16½ pounds of water to each barrel, the consumer paying at the same rate for 196 pounds of dried flour that he would for 212 pounds of undried. The consumer, then, has the certainty of purchasing and having flour always sweet and fresh, instead of running the risk of buying flour which is stale, musty, or sour.—*Elyria (Ohio) Courier.*

BAMFORD'S IMPROVED STOCKING FRAME.

Mr. W. Bamford, of Ipswich, Mass., has recently patented a valuable improvement in the Stocking Frame, consisting in the application and use of a conductor to each of the plain-stitch and rib-stitch needles, in such manner as to enable any one to carry on the process of knitting either plain or ribbed work, without the use of needles with beards or points, and a presser or pressers, such as are generally used in the common plain and ribbed, hand or power looms. His improvement is also applicable to what are denominated Warp Net Machines, whether automatic or moved by hand, and will perform one-third more work than any hand frame worked in the ordinary way with pressers. Mr. B. has expended a large amount in this invention, and performed the constant labor of nearly three years in bringing it to its present state of perfection.

The first application of the invention was in connection with a new Warp Frame and afterwards a common hand Plain Stocking Frame. The inventor then applied the "Rib," and succeeded in making ribbed work with the same motions that made plain work. This improvement, with a little expense, can be appended to every kind of stocking and warp frame now in use and save the *presser motion*, which has always been the most difficult and destructive one to every kind of frame.

This machine is capable of making one-third more *plain* work, and double the quantity of *ribbed* over one stocking frame that works with *pressers*. Mr. B.'s ribbed machine can be built at two-thirds the expense of the old *Derby rib* machine, which in fact is entirely superseded by this improvement, which saves two *presser* and one *heel paddle* motion to every *bout* or *course*, in which it must come into general use.

BRITISH SALES OF COPPER ORE.

The sales of copper ore in Cornwall during the last quarter have been 39,206 tons, realizing £175,609 16s. 6d., against 40,018 tons, which realized £187,770 14s. 6d. during the quarter ending June last.

At Swansea the sales of copper ore during the same period have been much greater than during the preceding three months. The quantity sold has been 15,143 tons, realizing £161,583 16s., averaging £10 13s. 4d. per ton, against 9,895 tons and £84,454 7s., average £8 10s. 8d. The great increase in the sales at Swansea during the period mentioned is attributed to the extended imports of foreign ores, principally from Australia and Cuba. The subjoined table of the respective quantities sold of each description, with the amount of purchase money, during the two last quarters, will doubtless be found interesting:

	QUARTER ENDED JUNE 24.				QUARTER ENDED SEPT. 29.			
	Tons.	Amount.			Tons.	Amount.		
Australian	565	£7,723	9	0	2,719	£41,387	19	6
Cobre	3,206	33,544	12	0	5,910	60,081	1	6
Cuba	1,863	15,489	0	6	2,230	20,200	14	0
Chili	95	1,451	5	0	1,001	23,628	12	6
Santiago	363	4,587	15	6	.....	.....	...	.
New Zealand	71	534	3	0	8	46	0	0
Total	6,163	£63,330	5	0	11,868	£145,344	7	6

The produce of the mines in Ireland has been on a diminished scale during the last quarter. The return is—

Berehaven.....tons	1,612	£9,299	11	0	Cronebane.....tons	1	£25	0	0
Knockmahon.....	1,279	5,220	19	0	Tigrono.....	1	25	0	0
Ballymurtagh.....	486	1,190	2	6					
Lackamore.....	30	255	18	0	Total.....	3,409	£16,016	10	6

Against 3,540 tons and £19,304 1s. 6d. during the quarter ending June last.

EXPERIMENTS WITH GALVANIZED WIRE AND HEMP ROPES.

An experiment was recently tried in Woolwich Dockyard, to ascertain the comparative strength of wire and hemp ropes. A wire rope, three inches round, and a hemp rope of three strands, hawser laid, common make, seven inches round, were spliced together and placed in the testing machine, and on the hydraulic power being applied, the hemp rope broke in the middle on the strain reaching 11¾ tons, the wire rope remaining apparently as strong as when the experiment commenced. A wire rope, 3½ inches round, was then spliced with an eight inch hemp shroud rope, and on the power being applied, the hemp rope broke in the middle with a strain of 10½ tons, the wire rope continuing apparently uninjured.

ELECTRIC DECOMPOSITIONS OF METALS.

The magnetic process of the late Mr. Woolrich, says the London Mechanics' Magazine, which was patented about five years ago, is, we believe, now universally allowed to be superior to every other. Mr. J. S. Woolrich, the son of the patentee, carries on an extensive business in plating for the trade at St. James-street, St. Paul's, Birmingham. The advantages of the magnecto plating are briefly these:—The metal deposited is perfectly smooth, and the adhesion between it and its base so firm as to be capable of standing a red heat without any injury. The silver may be deposited of any required degree of softness or hardness. And so also the quantity of silver put on the goods may be ascertained to the greatest nicety.

RASPBERRY VINEGAR OR SYRUP.

Put one quart of best white wine vinegar to two quarts of raspberries, not over ripe. Let them steep in the vinegar twenty-four hours; then strain them through a sieve, without pressing the fruit, and pour the liquor so strained on two quarts more of raspberries. In twenty-four hours more strain it off again, and to a pint of juice put one pound and a half of very fine loaf sugar. Put the above into a jar, and the jar into a pan of warm water, and let it stand till all the sugar is melted, taking off the scum as it rises; then take the jar from the warm water, and, when cold, bottle off for use. These directions are given from a correspondent of the Gardener's Chronicle.

QUICKSILVER MINES IN CALIFORNIA.

A gentleman, whose letter we have seen, and from which we are permitted to make an extract, says the *American Mining Journal*, dating from "Rancho de la Prussima Conception," in California, thus writes to a friend of his in Connecticut, of a quicksilver mine, owned by Alexander Forbes, Esq., British Consul at Tepsic. "Mr. Forbes is the owner of, perhaps, the richest quicksilver mine in the world, situated about 13 miles from this place. The mine has been worked but a few months, but the ore is extremely rich, and very abundant. The bed of ore is 42 feet thick, and of extent unknown. The only apparatus at present used for extracting the metal consists of three or four old potash kettles —very imperfect—yet, with these, over a thousand pounds, or $2,000 worth are obtained weekly. With suitable apparatus, it could clear easily half a million a year. Several other mines of quicksilver have been found in the neighborhood, of more or less promise, but none of them apparently so rich as this. They are mostly, with the exception of that of Mr. Forbes, in the hands of Americans. Mines of silver and gold have also been discovered; but what they will amount to remains to be seen. Mr. Forbes owns a tract pertaining to his mine of fourteen square miles."

THE BRITISH IRON AND STEEL TRADE.

Imports and Exports of Iron and Unwrought Steel.—The total quantity of foreign iron ore imported in the year ending April 5, 1848, was 21 tons; chromate of iron, 1,797 tons; pig iron, 473 tons; iron bars unwrought, 33,371 tons; bloom iron, 904 tons; rod iron, 3 tons; broken iron, 310 tons; iron hoops, 12 tons; cast iron, 41 tons; unwrought steel, 654 tons; and steel scraps, 36 tons. The declared value of wrought iron and steel imported amounted to £23,510. The total quantity of foreign bar iron exported was 5,053 tons; unwrought steel, 667 tons. The total quantity of British pig iron exported within the same period was 176,086 tons; bar iron, 214,874 tons; bolt and rod iron, 13,419 tons; cast iron, 26,321 tons; wire, 1,972 tons; anchors, grapnels, &c., 4,561 tons; hoops, 17,163 tons; nails, 5,735 tons; other sorts of wrought iron, 74,036 tons; old iron, 5,751 tons; unwrought steel, 9,776 tons. Our principal customers for British iron and steel are Prussia, Holland, France, and the United States of America, the latter more especially. The total quantity of British hardwares and cutlery exported from the United Kingdom in the year 1847 amounted to 20,614 tons, the declared value of which was £2,341,980 11s. 1d. The British machinery and mill work exported within the same period amounted in value to £1,263,015 10s. 4d.; of this amount Russia paid £226,635 19s.; the Hanseatic Towns, £151,665 2s.; Spain, £97,527; Italy, £108,888 19s. 2d.; British territories in the East Indies, £148,645 15s.; the British West Indies, £52,290 4s. 6d.

DAVID'S IMPROVED RAZOR.

Mr. David, cutler, of Leadenhall-street, London, has recently registered under the Utility Designs Act, a razor of highly improved configuration, which consists in giving a curvilinear form, lengthwise, to the edge of the blade, and leaving more room for obtaining a good purchase on it when shaving. The handle also is bevelled within-side, to allow more space for the entry of the blade when shutting to—thus preventing the injury to its edge, that frequently occurs from catching on the sides of the handle. These improvements, combined with the improved principle adopted in grinding the blade, produce an instrument having every advantage over those hitherto made.

CULTIVATION OF COTTON IN INDIA.

The experiments which have been making in Manchester by the Commercial Association, recently, under the superintendence of Dr. Royle, to test the small cottage gin proposed to be sent out among the small cultivators of cotton in India, show the following results as contrasted with the large hand gin and the churka, at present used there. The cottage gin, made of iron, is found to clean 20 lb. per man per hour; made of wood, it turns out 17 lb. per man per hour. The average quantity cleaned by the large hand gins of India per man per hour is only 10 lb. and a fraction, and the churka cleans only 3 lb. This result is decidedly more favorable than that detailed by the chairman at the late meeting, a fact which, we are informed, is owing to a further improvement in the machine The saving in cost would be in proportion.

JOURNAL OF BANKING, CURRENCY AND FINANCE.

THE REVENUE OF FRANCE IN 1847 AND 1848.

THE return just made by the French Minister of Finances of the amount of the receipts received by the Treasury, under the head of "Imposts and Indirect Revenues," during the first nine months of 1848, as compared with the receipts for the same period of 1846 and 1847, presents some curious though not very gratifying results. They show a fearful diminution since February in the aggregate trade of the country, and, unfortunately, they also show very clearly, notwithstanding the rumors industriously spread of a gradual resumption in the trade and manufactures of France, that there is not the slightest ground for that statement. By the receipts for July, August, and September, 1848, as compared with the same months of 1847, it appears that in July there is a diminution in the receipts of 12,796,000 francs; in August a diminution of 13,807,000 francs; and in September a diminution of 13,761,000 francs. On the whole three months there is an aggregate falling off of 37,203,000 francs as compared with 1846, and of 40,544,000 francs as compared with 1847. It also appears that while the falling off for the quarter just past of the present year is upwards of forty millions and a half, the falling off for the two previous quarters was under sixty-two millions. This surely shows no symptoms of a resumption of trade.

The following is a detailed table of the receipts of indirect taxes, for the first nine months of 1848, as compared with 1847:—

Designation of the taxes.	1848. *Francs.*	1847. *Francs.*
Registration duties, hypotheques, &c.	129,812,000	165,916,000
Stamp duties	22,577,000	30,297,000
Custom-house import duties. Corn	449,000	2,776,000
Custom-house import duties. Miscellaneous goods	41,760,000	61,679,000
Custom-house import duties. French colonial sugar	15,909,000	31,836,000
Custom-house import duties. Foreign do	5,157,000	5,320,000
Export duties	1,523,000	1,478,000
Navigation duties	1,552,000	2,138,000
Duties and products at customs	1,377,000	2,129,000
Salt duties within bounds of customs	34,288,000	37,064,000
Duty on potable liquors	65,120,000	72,700,000
Salt tax beyond bounds of customs	8,525,000	9,260,000
Tax on home-made sugar	15,685,000	16,398,000
Miscellaneous duties	21,992,000	29,345,000
Produce of the sale of tobacco	86,004,000	86,449,000
" " gunpowder	4,865,000	5,175,000
" " letters, sending of money, &c.	37,439,000	36,788,000
" " places in the "malle-poste."	1,159,000	1,540,000
" " " packet-boats	911,000	786,000
Total	496,412,000	518,774,000

This shows an aggregate falling off on the present year of 102,362,000 francs. There is a diminution under every head excepting three, and these are significant. The export duties have increased to the amount of 45,000 francs, in consequence of the vast quantity of property removed from France. The post-office revenue has increased 651,000 francs, in consequence of the enormous quantity of newspapers and correspondence occasioned by the revolution of February; and the produce of places in the packet-boats has increased, in consequence of the vast number of persons who have fled from France. This species of improvement will hardly be a matter of congratulation to the Minister of Finances. On the other hand, it will be seen that the import duties have fallen off to a frightful extent. Take, for instance, the duties on French colonial sugars, which have diminished from 31,836,000 francs to 15,909,000, or rather more than one-half; and the custom-house duties on miscellaneous merchandise, which have diminished one-third. The only article producing a large revenue, upon which there is not a heavy falling off, is tobacco. It still returns nearly as much as it did in the flourishing times of the monarchy. Even the misery produced by a revolution does not affect the consumption of that

pernicious weed. On the contrary, it must have considerably increased, as it has been ascertained that a large quantity was surreptitiously introduced into France during the confusion produced by the first days of the revolution.

The return of the direct taxes collected has also been published. The total amount of these taxes is—ordinary direct contributions 430,437,000 francs, and the 45 centime tax, 191,780,000 francs, making in all 622,217,000 francs. Of this sum, the amount collected up to the 30th of September was 375,744,000 francs; so that there remains 246,473,000 francs of arrears still to be collected, and out of that sum 65,695,000 francs is of the 45 centime tax.

REVENUE OF GREAT BRITAIN.

AN ABSTRACT OF THE NETT PRODUCE OF THE REVENUE OF GREAT BRITAIN, IN THE YEARS AND QUARTERS ENDED JULY 5, 1847 AND 1848, SHOWING THE INCREASE OR DECREASE THEREOF.

YEARS ENDED JULY 5.

	1847.	1848.	Increase.	Decrease.
Customs	£18,792,348	£17,888,988	.....	£903,360
Excise	12,733,998	12,263,233	.....	470,765
Stamps	7,201,797	6,449,108	.....	752,689
Taxes	4,325,732	4,306,703	.....	19,029
Property tax	5,491,936	5,411,253	.....	80,683
Post office	854,000	787,000	.....	67,000
Crown lands	112,000	71,000	.....	41,000
Miscellaneous	307,621	230,201	.....	77,420
Total ordinary revenue	£49,819,432	£47,407,486	.....	£2,411,946
China money	227,644	455,021	£227,377	.....
Imprest and other moneys	208,190	187,408	.....	20,782
Repayment of advances	804,843	422,485	.....	382,358
Total income	£51,060,109	£48,472,400	£227,377	£2,815,086
Deduct increase				227,377
Decrease on the year				£2,587,709

QUARTERS ENDED JULY 5.

	1847.	1848.	Increase.	Decrease.
Customs	£4,519,119	£4,447,832	.....	£71,287
Excise	3,291,052	3,473,803	£182,751	.....
Stamps	1,869,464	1,557,640	.....	311,824
Taxes	2,075,001	2,034,133	.....	40,868
Property tax	1,036,517	988,401	.....	48,116
Post office	215,000	136,000	.....	79,000
Crown lands	.....	10,000	10,000	.....
Miscellaneous	7,461	89,022	81,561	.....
Total ordinary revenue	£13,013,614	£12,736,831	£274,312	£551,095
China money	.....	.....	.....	.....
Imprest and other moneys	88,632	88,805	173	.....
Repayment of advances	137,944	86,813	.....	51,131
Total income	£13,240,190	£12,912,449	£274,485	£602,226
Deduct increase				274,485
Decrease on the quarter				£327,741

FINANCES OF THE CROTON AQUEDUCT BOARD.

The annual report of the Croton Aqueduct Board shows that the receipts for the year commencing the 1st May, 1847, and ending the 30th April, 1848, have been $226,551 83, an increase of $32,000 49 over the receipts of the preceding year. The expenditures for the same period of time have been $71,565 74, which is $17,162 74 more than the outlay of the previous year, but of the items which contribute to the total of these expen-

ditures, the large sum of $34,519 16 has been paid for water pipes and branches. The line of pipe laid down in the city has been extended nearly five miles; the whole length of pipe with this addition is now about 175 miles. The report for the last quarter commencing May 1st and terminating July 31st of the present year, exhibits receipts amounting to $189,917 03, being an increase of $14,866 98 over the receipts of the corresponding quarter of the last year. The expenditures for the same time were $20,310 69, of which more than half was for new pipes and branches. The opinion is expressed that the revenue will, in a few years, pay the entire interest on the debt, and, with good management, in time contribute to the discharge of its principal. The aqueduct, reservoirs, and lines of pipe throughout the city, are represented to be in good condition. The enormous waste of the water is complained of, resulting from the practice in some tenements of letting it run day and night for the purpose of purification in summer, and to prevent its freezing in winter.

THE WEALTH OF NEW YORK CITY.

We give below a tabular statement of the relative value of the real and personal estate in the city and county of New York, as assessed in 1847 and 1848, as made up at the Comptroller's Office, city of New York, October 6th, 1848:—

	Assessments of 1847.		Assessments of 1848.	
Wards.	Real estate.	Personal estate.	Real estate.	Personal estate.
1.....	$28,124,700 00	$24,881,892 00	$27,732,350 00	$24,677,851 84
2.....	14,386,850 00	1,961,371 65	14,547,350 00	1,754,447 46
3.....	12,112,350 00	4,544,500 37	12,385,600 00	4,665,739 74
4.....	7,910,550 00	1,410,137 00	7,953,220 00	1,188,937 00
5.....	9,107,050 00	1,901,354 00	9,425,000 00	1,945,400 00
6.....	7,299,750 00	893,250 00	7,510,960 00	587,300 00
7.....	10,869,912 00	2,635,700 00	10,871,205 00	2,311,522 00
8.....	11,366,250 00	2,702,935 90	11,436,100 00	1,687,699 00
9.....	10,158,400 00	1,628,605 54	10,506,800 00	1,620,114 20
10.....	6,335,500 00	566,250 00	6,375,400 00	844,337 00
11.....	4,965,600 00	168,700 00	5,249,400 00	153,450 00
12.....	5,914,544 00	646,850 00	6,721,311 00	674,850 00
13.....	4,196,000 00	403,389 83	4,246,050 00	395,905 73
14.....	7,011,400 00	2,029,725 33	7,000,200 00	1,793,127 40
15.....	16,563,950 00	9,684,431 20	17,048,500 00	12,373,305 55
16.....	8,665,050 00	316,514 20	9,559,159 00	473,014 20
17.....	10,789,900 00	2,171,930 00	11,100,150 00	2,316,870 00
18.....	11,537,630 00	1,290,380 00	13,358,820 00	1,700,580 00
Total....	$187,315,385 00	$59,837,917 06	$193,027,576 00	$61,164,451 12

Total valuation in county	$254,192,027 12
" " water district	243,595,411 12
" " lamp "	247,030,726 12
" " south of centre of Thirty-fourth-street	244,964,686 12
Total increase of real estate	$5,712,190 00
" " personal estate	1,326,534 06
Total increase	$7,038,724 06

TAXATION OF IRELAND.

It would seem from the following statement, which we find in *Wilmer & Smith's Times*, that Ireland is one of the least taxed portions of the British empire. Out of £52,000,000 levied in the United Kingdom, scarce £4,500,000 is raised in Ireland, from a population equal to half the population of England. The total nett revenue of Ireland in 1846 was only £4,333,933, a sum barely more than sufficient to provide the interest of the portion of the national debt assigned to Ireland. Taking the annual revenue in round numbers of Ireland at present as £4,600,000, the expenditure as £3,600,000, and the interest on debt at £4,200,000, the deficiency is £3,200,000. Ireland, therefore, costs the British Exchequer at least this sum. Estimating the annual deficiency of Ireland at £3,000,000 sterling, the cost of Ireland to England since the union amounts to £141,000,000.

MERCANTILE MISCELLANIES.

THE LITERATURE AND STATISTICS OF COMMERCE.

[FROM THE DRY-GOODS REPORTER AND MERCHANTS' GAZETTE.]

Dr. Johnson, in writing the preface for a Commercial Dictionary, remarked that there was no man who was not in some degree a merchant, who had not something to buy and something to sell, and who did not, therefore, want such instructions as would teach him the true value of possessions or commodities. This remark of the learned Doctor applies with peculiar force to the citizens of the United States, the descendants of a people who were denominated by Napoleon a nation of Shopkeepers. The description of ports and cities may instruct the geographer as well as if they were found in books appropriated to his own science; and the doctrine of funds, the laws of trade, insurance, coinage and currency, monopolies, exchanges, and duties, is so necessary to the politician, that without it he can be of no use either in the council or in the Senate, nor can he think or speak justly either on war or trade.

A brief notice of some of the most celebrated Commercial Dictionaries may here be referred to as an evidence of the early attention paid to the literature and statistics of Commerce. The Grand Dictionnaire du Commerce was published at Paris in 1723, in two volumes folio; a supplemental volume being added in 1730. This was the first work of the kind that appeared in modern Europe, and has furnished the principal part of the materials for most of those by which it has been followed. This work was liberally patronized by the French government. In 1769, the Abbe Morellitt projected a Commercial Dictionary in six volumes; but for want of sufficient encouragement but one was ever completed. Another Commercial Dictionary was published in Paris in 1783, in three volumes quarto, forming part of the Encyclopedia Methodique. The editors borrowed largely from M. Savary, and added but little to the stock of commercial information collected by that laborious statician.

The earliest Commercial Dictionary published in Europe was compiled by Postlethwait, a diligent and indefatigable writer. The first part of the first edition appeared in 1751. The last edition, in two enormous folio volumes, was published in 1774. It was little more, however, than a translation of the French Dictionary published in 1730. In 1761, Richard Rolt published a similar work in one pretty large volume. McCulloch considers the preface the best part of the work, and that was contributed by Dr. Johnson. It is for the most part an abridgment of Postlethwait. Thomas Mortimer, at that time consul at the Netherlands, published a Dictionary of Commerce in 1766. McCulloch's Dictionary was published, we believe, in 1825–30. The first impression of 2,000 copies was entirely sold off in less than nine months from the date of its publication. It has undergone various modifications, and many additions and alterations have been made, as new editions have been called for. It is now in general use, and was made, perhaps, at the time of its publication, the best work of the kind; but the compiler is far advanced in life, and in the new editions that have been published has scarcely succeeded in keeping pace with the progressive developments of commerce. The best work of the kind, in our opinion, is the "Dictionnaire du Commerce et des Marchandises," published at Paris in 1837, prepared by a great number of competent hands. We should be glad to see an English translation of it, with such emendations as would adapt it particularly to the United States.

Passing from the "Dictionnaire du Commerce," the series of papers prepared and presented to the British Parliament by John Macgregor, by command of Her Majesty, are worthy of notice. They bear the general title of "Commercial Statistics; a Digest of the productive resources, commercial legislation, customs, tariffs, navigation, port and quarantine laws and charges, shipping imports and exports, and the moneys, weights, and measures of all nations, including all British Commercial Treaties with Foreign States, collected from authentic records, and consolidated with special reference to British and foreign products, trade and navigation." The first two volumes, which were laid before Parliament in parts, contain about 2,300 pages, and embrace most of the countries of Europe, Asia, and Africa. The third part is devoted entirely to the United States, and of itself occupies a volume of 1,427 royal octavo pages, equal to one-half the space devoted to all the parts of the world included in the two first volumes; a fact showing, we think, most conclusively, how large a share we hold in the rank of industrial nations, and we may add to the abundant materials furnished and sources indicated by that unique periodical, the "Merchants' Magazine and Commercial Review," which deserves and shall re-

ceive, before we have done with the subject, more than a mere passing notice. Indeed, nearly one-half of Mr. Macgregor's large volume pertaining to the United States is derived from Hunt.

The importance of statistical and commercial information can scarcely be too highly appreciated. There is no man engaged in the pursuits of active life, no matter what his profession, who does not frequently feel the need of some comprehensive book of reference to which he may look for accurate statistics of every thing connected with his own country, and records of the prominent transactions and commercial progress of all the principal nations of the earth.

But most urgently of all is this need felt by the merchant, whose property is identified with the welfare of the commerce of the country, and who, from the necessity of his position, must feel an interest in promoting information on all subjects connected with the wealth, greatness, and happiness of the land. The day has long gone by when an ignorant man can be a successful merchant. As the extent and influence of commercial pursuits have increased, the necessity for a wider and more thorough mercantile education has increased also. A mere tact for accumulating dollars and cents, an ingenuity for over-reaching the honest and unwary, though it may even yet occasionally (though by no means surely) make a man wealthy, cannot confer upon him the character of an honorable, intelligent merchant. For this a thorough cultivation, a wide knowledge, and a stern adherence to principle, are of absolute necessity. The profession now embraces a more varied knowledge, a more general information of the soil, climate, and productions of all lands, of the history, political complexion, laws, language, and customs of the world, than has ever before been considered necessary. There is every reason why the merchants of the United States should especially aim at this nobler development of mercantile character. Our commerce, though already most widely extended, is yet in the full vigor of its youth, and is rapidly and surely progressing in the field of its conquests and achievements. It should not, therefore, be suffered to depend for its extension and character upon men of narrow minds and of limited intelligence; but all engaged in its multifarious pursuits should aim to make themselves familiar with its principles, with the laws which govern its development, with the provisions of law for its security, with the extent of its relations, and all the facts in any way connected with its operations. A great portion of the Civil Law is framed with a distinct reference to the interests of commerce, and in a thousand ways it continually connects itself with other departments of human industry.

We come now to speak of a work in our own country of equal excellence, in a scientific point of view, with either of the works alluded to in the former part of this article; and as a practical exposition of the doings of the commercial world and statistics constantly changing with the growth and change of cities and countries, it is evidently superior. Even on topics where the statements must be more or less permanent, the articles in the compilations of McCulloch and Macgregor will not be found more complete; but, in respect to the current transactions of commerce, and the multitude of new facts coming to our knowledge, the "MERCHANTS' MAGAZINE," the several volumes of which we have been perusing with great interest, is the most useful of the three. The Merchants' Magazine was, we understand, projected in 1838, but the first number did not make its appearance until July, 1839. The idea was, as we have been informed, suggested to the mind of Mr. Hunt by the fact that there were in existence at that time, magazines or journals devoted to the interests of farmers, mechanics, lawyers, medical men, and almost every art and science. The suggestion thus presented was very natural, and it is matter of surprise to many that it had occurred to no one before. It has now been extended to eighteen semi-annual volumes, each embracing about six hundred closely printed octavo pages, and it has been uniformly sustained with promptitude, and the papers marked with more than ordinary ability. During the period when it was commenced, such a work in this country was peculiarly required. Although the development of the various physical interests of the country had been almost unexampled, the precise character and amount of the interests were but partially known. It is true that occasional acts had been passed by the national and some of our State legislatures, particularly New York and Massachusetts, for the purpose of collecting the statistics of different branches of industry and production, and documents had occasionally been published, under their authority, embodying information respecting our commercial relations, but the statistical matter thus collected was not comprehensive, nor always correct, and it was, moreover, necessarily fragmentary in its character. Such English statistical works as McCulloch, &c., treated but slightly of our commerce, and by no means supplied the deficiency, because of the limited circulation to which they had attained, their republication among us not having been commenced, to say nothing of their being less satisfactory on our country than upon the countries of Europe, or of the disadvantages of their statements being constantly rendered

somewhat obsolete by current changes. The Merchants' Magazine was started for the express purpose of furnishing to the merchants throughout the United States a work which should present to them, conveniently arranged and carefully digested, all the information upon commerce and the various departments connected more or less directly with it which their position and profession demanded. It addressed itself to the labor of reviewing the progress of commercial history, and exhibiting in a classified form the existing facts connected with the subject which lay scattered in a confused mass, or buried amid the rubbish of official papers throughout the various parts of the Union, as well as abroad. This the Merchants' Magazine has done in a manner we feel warranted in pronouncing far superior to anything of the kind ever published in this country or Europe.

The success which has attended its publication in this respect has been all that its warmest friends could desire. Prior to the establishment of this Magazine, the merchants of the nation, if they found it necessary to consult records bearing upon their interests, were obliged to have recourse either to the necessarily ephemeral productions of the day, or to Congressional and Parliamentary speeches and documents from time to time, from the absence of any permanent journal embracing that particular and wide range of topics. It contains all the details and matter in any way bearing upon the commerce and resources of the country and the world, and constitutes for the merchant, political economist, and statesman, a permanent record to which they can severally resort for the information most required. It has been encouraged by a satisfactory measure of the public confidence, which it has, beyond question, deserved. In looking over the volumes we have been surprised to see the great number and importance of the topics which, somewhere in its course, it has embraced. The classification of the various departments of the Merchants' Magazine is adapted to embrace the most interesting information in the most convenient and accessible form, so that the enquirer may find, in the several departments, conveniently arranged for present and future reference, whatever may be sought regarding the subjects of which they treat. Each monthly issue has contained several elaborate papers, including historical, descriptive, or argumentative sketches of some important topic connected with commercial literature or law. Many of these papers have been contributed by able writers in various parts of the country. They refer to subjects not only of immediate and practical, but of permanent interest—a department of literature which, although it bears most directly upon the pecuniary prosperity, and even subsistence of men, has been much neglected in the search after that which appeals merely to the taste and imagination. Most of the topics have been heretofore discussed only in the Halls of Legislation; and it is somewhat singular that, notwithstanding we have attained to the rank of the second commercial and industrial power upon the globe, there was no work extant illustrating the multiform operations, or exhibiting a history of the causes and consequences bearing upon the commercial interests.

Succeeding the department in the Merchants' Magazine embracing the more elaborate articles, is that which includes the Mercantile Law Cases. This is one of great value, not only to the merchant, but to the legal profession, particularly in commercial cities, where the connection between the merchant and the lawyer is so intimate. Not that the merchant, who looks at law cases thus recorded, is necessarily to become his own lawyer, or consider himself competent to depend upon his own judgment in the exercise of all his commercial transactions. Still, the record is valuable, as far as it extends, in informing him respecting recent decisions which have been made upon topics relating to the ever-varying exigencies of trade and commercial operations. They are a guide to the merchant in a similar train of circumstances which may occur in his own case.

The Commercial Chronicle and Review, embracing a financial review of the United States, and, indeed, of Europe, illustrated with tabular statements, comprises a most interesting and compendious digest of the various causes which have borne upon the state of trade during the previous month, the probable changes which are to take place in the commercial world, and all those facts of a practical character bearing upon the state of the markets at home and abroad. This may be considered practically as constituting one of the most important features of Hunt's Magazine.

The department especially occupied by Commercial Statistics embraces a great variety of tabular statements touching the various topics within the scope of the Merchants' Magazine, relating to the various countries with which we have commercial intercourse, prices current, the production and consumption of merchandise, and all those other facts which tend to exhibit the trade and commerce of our own and other countries. Succeeding this is another department embodying an account of Commercial Regulations of all nations, including treaties of commerce and navigation, tariffs of imports and exports, port charges, and all other matters pertaining to this important branch of commercial legislation. Another department of the Magazine is devoted to Nautical Intelligence, in which are re-

corded all discoveries upon the ocean, the establishment of new light-houses, and similar facts bearing materially upon the interests of navigation. There is, also, a department devoted to Railroad, Canal, and Steamboat Statistics; another to Manufactures and Mining; another to Finance, Banking, and Currency, and another to Mercantile Miscellanies. This classification of subjects is regularly preserved in each monthly issue, and the information on all these subjects fresh and full.

The general character of the Merchants' Magazine is broad and liberal; avoiding everything of a partizan or sectional tendency, and aiming at the diffusion of accurate and useful commercial information of every species within the very comprehensive range of its plan. The success that has marked its progress, as well as the reputation it has acquired at home and abroad, must be gratifying to its proprietor. It has been frequently quoted in the public documents emanating from the various departments of the American government; referred to in our courts of law; and is regularly taken by the British Board of Trade, the French Administration of Commerce, and regarded by them all as authority of undoubted correctness and entitled to the utmost confidence. By other governments of Europe it is treated with the same respect, and its rank, as an authority of the highest character in all matters relating to statistics, may be deemed permanently settled. The establishment of two works, one in London, and another at New Orleans, ostensibly on a similar basis, during the last year or two, though by no means comparable with this, affords pretty good evidence of the popularity of the plan.

But time and space admonish us to close; which, however, we cannot do without recommending the work to the attention of every merchant, who has any taste for the theory and details of his profession, and who aspires to be something more than a mere shopman or a mere book-keeper. The perusal of works like this—and we are glad to see that the theory of commerce is beginning to attract some attention among us—is calculated, far more than anything else, to give to our merchants that comprehensiveness of view and vigor of judgment in which can alone be found any security against those seasons of wild speculation with which we are now periodically visited, and which, after a year or two of apparent prosperity, overwhelm the country with long seasons of suffering and distress.

BOSTON MERCANTILE LIBRARY ASSOCIATION.

The anniversary of this Association was celebrated on Wednesday evening, November 15th, by an address from the Hon. Daniel Webster, and a poem by James T. Fields, Esq. The great hall of the Tremont Temple was filled from floor to ceiling on the occasion, by the largest and most brilliant audience ever crammed into it. All the magnates of the city and the adjoining towns were present. There, on the platform (not the Buffalo and Baltimore one) were the prominent politicians in the late political contest. There was Robert C. Winthrop, looking Boston Atlases at the audience, and there, a few feet from him, was his rival for Congressional honors, Charles Sumner, looking Boston Republicans. Governor Briggs was there, not exactly certain whether he was elected by the people, or to be elected by the legislature, but as smiling, as collarless, as compact, and as resigned as ever. There was President Everett, the incarnation of the spirit of all the world's universities, calm, cool, classic, with that indescribable sadness in his countenance, which makes his face linger longer in the memory than that of any other man, except, it may be, Choate. There was Mayor Quincy, smooth, clear, and white, as his own Long Pond water; and there was his father, Josiah Quincy, the representative of a past age, though seemingly as active as the most bustling man of the present. There, also, were the "merchant princes" of Boston, with faces full of benevolence and pockets full of money, every wrinkle and white hair a hieroglyphic of a prosperous adventure,—men who have given away more money than most traders have ever made. And there was Oliver Wendell Holmes, with a face expressing every mood and alteration of his infinitely sensitive intellect, always charged with the electric fluid, always keen and sparkling, always over-informed and running over with mind. In short, to use the expression of a gentleman, the pertinence of whose remark must excuse its inelegance, "There was more brain and 'tin' on that platform, than ever he see."

When Mr. Webster appeared, the pent up voices of the audience exploded in a series of earthquake cheers. The subject of his address was the history of the formation of the Constitution. The rigid logic, the close analysis, the firm hold upon principles, the rigorous method of the great expounder, were more displayed than his power of impassioned argumentation, or his power of fierce, sharp, overwhelming declamation. He was evidently suffering from recent illness, and only occasionally were heard the deep, or the high and ringing tones of his almost matchless voice. It is a curious peculiarity of Mr. Webster, that he can only be excited by his subject, never by his audience. There is no

other living orator who would not have seized the occasion of Wednesday evening for making a display, and straining his faculties to the utmost to charm and dazzle his vast audience. As it was, with the exception of a passage on the importance of the Union, and another on the revolutions of Europe, there was little in the address to impress his hearers with the fact that the greatest man living was speaking. With the majority, it probably passed as a good historical lecture, which any person of talent and education might have written. The sagacity and sureness with which the vital points were seized, and the luminous style in which they were presented,—everything, in short, which indicated strength and comprehension of understanding in sifting out the leading ideas from the vast mass of documents which the address covered,—could not be appreciated. It was curious, however, to notice the stillness and almost breathless attention of the audience, and the eagerness with which they seemed to wait for the burst of eloquence which was to lift them from their feet. But alas! "man never is but always is to be"—the proverb is somewhat musty.

After the address followed a poem, racy and polished, full of sparkling points, yet with a broad basis of truth, and of a singular unity of design—by James T. Fields, a gentleman whose fine and fertile genius too seldom find public expression. His subject was the Post of Honor, and he illustrated a happily chosen theme with marked originality, beauty, and brilliancy. Avoiding somewhat the beaten track, and neglecting comparatively the more dazzling lights of fame, he penetrated, with a fancy lithe, vigorous, and teeming with invention, into untrodden ways, and elicited the fine essence of honor which lies in humbler life. The poem was veined with a kindly satire, and surrounded with a genial warmth of humor; and both in bright, flashing, and palpable wit, and in sly, demure, elusive strokes and allusions—which just peeped out for a moment from the text, and were then as immediately withdrawn—it was eminently successful in giving the poetry of the ludicrous. The allusions to Lamb, Gray, and the Sisters of Charity, were touches of genuine pathos, as those to Nelson, Lawrence, and Jerome, were of energetic and impassioned expression. The diction was full of apt and expressive words, original verbal combinations, and felicitous epithets; and in managing the heroic couplet, Mr. Fields made it flexible to every variation in thought and sentiment, and finely harmonious throughout. The poem was delivered with force and elegance, and won upon the increasing attention of a delighted and enthusiastic audience. It closed with a magnificent tribute to Webster, every couplet of which was loudly applauded; and at the end three cheers were given for Webster, three for the poet—and as the audience were in the vein —some person who had not extinguished the political fires lighted up in the late campaign, suggested three for "Old Zack," which were partially given.—*Literary World.*

THE STURGEON: ITS COMMERCIAL VALUE.

We give below the substance of a lecture recently delivered by Professor B. Jaeger, which will perhaps serve to direct the attention of enterprising men to this important branch of commerce:—

Among the great varieties of the natural productions of the United States are many which could considerably increase the wealth of the nation, but which have until now entirely escaped the attention of the mercantile world. It is indeed singular that we neglect to make use of an article which we have in abundance before our eyes, and by the commerce of which other nations gain millions every year.

I speak here of the Sturgeon, a fish of large size, which enters our rivers in numberless quantities, like shad and herring, as in the Potomac, Delaware, Hudson, and above all, the Kennebec, and of which very little use is made in this country.

This fish is found not only in North America but also in the rivers which empty into the Black and Caspian Seas, as well as in the Oby and other streams of Siberia.

The principal Sturgeon fisheries are, without doubt, those on the Volga, near Astracan, and those on the Don, which are carried on chiefly by the Cossacks of that country, who find their occupation much more lucrative than agriculture, which they neglect entirely, in spite of the very fertile soil of their lands.

This fish forms an important object of fishery and commerce to many nations, as well for its flesh as for the caviar, prepared from its roe, and the isinglass from its swimming bladder. The city of Astracan exports every year several thousand tons of pickled Sturgeon and caviar for consumption in the Russian Empire, and Odessa much larger quantities for Greece, Italy, France, and the other parts of Europe.

The Sturgeon ascends the rivers sometimes four hundred miles from their mouth. Its length is generally eight feet, and its weight over two hundred pounds, but it is sometimes

the case that some are found which weigh five hundred pounds, and in Norway one was caught which weighed one thousand pounds. When the catching of the Sturgeons on the Oby, the Volga, Jaik, and Don begins, there arrive at those places from the remotest parts of the Russian Empire a considerable number of merchants, who purchase the fish and prepare them for transportation. The average price of one fish, without the roe and swimming bladder, is generally $4. A large one which weighs over two hundred pounds is sold at from $4 to $6, and contains forty pounds caviar, or prepared roe, which is sold for $1 50.

The flesh is fat, very palatable, and much better in the summer, after the fish has been some time in fresh water. That which is not eaten fresh is cut into large slices, salted, peppered, broiled, and put in barrels, where it is preserved in vinegar, and fit for transport. A considerable quantity of their flesh is smoked. The wholesale price of pickled Sturgeon is from $6 to $12 a hundred weight. The caviar is prepared in three different manners, namely:—

1. Two pounds of salt are added to forty pounds of roe, and dried upon mats in the sun. The price of forty pounds is $1.

2. Eight-tenths of a pound of salt are mixed with forty pounds of roe, then dried upon nets or sieves, and pressed into barrels. This is sold for a little more.

3. The best caviar is that when the roe is put into sacks made of tow cloth, and left for some time in a strong pickle. These sacks are then suspended in order to let the salt, watery substance run off, and finally squeezed, after which the roe is dried during twelve hours and pressed into barrels. This roe, of which forty pounds are sold for $1 50 at the place, is that which is sent all over Asia and Europe as a considerable article of commerce, and known by the name of caviar, and is eaten with bread like cheese.

Another very profitable part of the Sturgeon is the swimming bladder, of which isinglass is made. For this purpose it is cut open, washed, and the silvery glutinous skin exposed to the air for some hours, by which process it can easily be separated from the external skin, which is of no use. This glutinous skin is placed between wet cloths, and shortly after each piece is rolled up and fastened in a serpentine form on a board; after they are partly dry they are hung up on strings in a shady place.

This valuable and extensive article of commerce is the isinglass of our shops, and it is sold there for about $50 a hundred weight.

There is made isinglass also from the swimming bladder of the catfish, and of some others, but as this is very inferior to that from the Sturgeon, it brings scarcely $10 a hundred weight.

The Sturgeon is found in immense quantities in the United States and North America, from Virginia up to the highest habitable northern latitudes, where they ascend the rivers from 300 to 500 miles up. The Potomac, Delaware, Hudson, and principally the Kennebec, as well as many other rivers, contain such a quantity of Sturgeons, that from those rivers alone, without counting those farther north of Maine, according to my calculation, the annual export of pickled Sturgeon, caviar, and isinglass alone, would be worth nearly half a million of dollars. Pickled Sturgeon and caviar is a favorite food of the descendants of Spain and Portugal in South America, as well as of the inhabitants of the West India Islands, principally during Lent; and isinglass would be an article of home consumption as well as for the European market.

But the Sturgeon is not a very favorite dish in our country; it brings scarcely five cents a pound in the market, and the roe and swimming bladder are always thrown away. Our fishermen are, therefore, not much encouraged in catching those fishes, though, according to careful observations, from 30,000 to 40,000 Sturgeons could be annually caught in the rivers of the United States.

There are found two species of Sturgeons in our rivers, namely: 1st. The round nosed Sturgeon, which is generally eight feet or more long, and weighs over two hundred pounds. 2d. The sharp nosed Sturgeon, which is seldom more than five feet long, and weighs about one hundred and fifty pounds, or more.

The Sturgeon was highly appreciated by the ancient Romans and Greeks. It was the principal dish at all great dinner parties, and Cicero reproached epicures on account of their spending so much money for this fish. Pliny says that this fish was served at the most sumptuous tables, and always carried by servants crowned with garlands of flowers, and accompanied by a band of musicians. And even at this time one pound of fresh Sturgeon cost $4 in Rome, where this fish is very rare.

I leave this subject to the judgment of our intelligent merchants, to profit by an opportunity to increase their own wealth and that of the community, by introducing this new article of commerce.

THE SHIP CANAL FROM THE ATLANTIC TO THE PACIFIC.

BY FRANCIS LIEBER.

An Ode to the American People and their Congress, on reading the Message of the United States President in December, 1847.

REND America asunder
And unite the Binding Sea
That emboldens Man and tempers—
Make the ocean free.

Break the bolt which bars the passage,
That our River richly pours
Western wealth to western nations;
Let that sea be ours—

Ours by all the hardy whalers,
By the pointing Oregon,
By the west impelled and working
Unthralled Saxon son.

Long indeed they have been wooing,
The Pacific and his bride;
Now 'tis time for holy wedding—
Join them by the tide.

Have the snowy surfs not struggled
Many centuries in vain,
That their lips might seal the union?
Lock them Main to Main.

When the mighty God of nature
Made his favored continent,
He allowed it yet unsevered,
That a race be sent,

Able, mindful of his purpose,
Prone to people, to subdue,
And to bind the lands with iron,
Or to force them through.

What the prophet-navigator,
Seeking straits to his Catais,
But began, now consummate it—
Make the strait and pass.

Blessed eyes, that shall behold it,
When the pointing boom shall veer,
Leading through the parted Andes,
While the nations cheer!

There at Suez, Europe's mattock
Cuts the briny road with skill,
And must Darien bid defiance
To the pilot still?

Do we breathe this breath of knowledge
Purely to enjoy its zest?
Shall the iron arm of science
Like a sluggard rest?

Up then, at it! earnest People!
Bravely wrought thy scorning blade,
But there's fresher fame in store yet,
Glory for the spade.

What we want is naught in envy,
But for all we pioneer;
Let the keels of every nation
Through the isthmus steer.

Must the globe be always girded
Ere we get to Bramah's priest?
Take the tissues of your Lowells
Westward to the East.

Ye, that vanquish pain and distance,
Ye, enmeshing Time with wire,
Court ye patiently forever
Yon antartic ire?

Shall the mariner forever
Double the impeding capes,
While his longsome and retracing
Needless course he shapes?

What was daring for our fathers,
To defy those billows fierce,
Is but tame for their descendants;
We are bid to pierce.

We that fight with printing armies,
Settle sons on forlorn track
As the Romans flung their eagles,
But to win them back;

Who, undoubting, worship boldness,
And, if baffled, bolder rise,
Should *we* lag when Grandeur beckons
To this good enterprise?

Let the vastness not appal us;
Greatness is thy destiny;
Let the doubters not recall us;
Venture suits the free.

Like a seer, I see her throning,
Winland, strong in freedom's health,
Warding peace on both the waters,
Widest Commonwealth—

Crowned with wreaths that still grow greener,
Guerdon for untiring pain,
For the wise, the stout and steadfast:
Rend the land in twain!

Cleave America asunder,
This is worthy work for thee;
Hark! The seas roll up imploring—
"Make the ocean free."

THE THIEF AND THE DEFAULTER.

Stealing a loaf of bread or a string of onions, is called *petit larceny;* but the defaulter, or fraudulent official, in starched collar and broadcloth coat, who makes away with fifty, seventy-five, or an hundred thousand dollars of other people's hard earnings and hard dollars, is politely adjudged to be simply guilty of a *peccadillo!* The former is locked

up in jail, and the latter is admitted to a free and easy bail. The one is hustled out of the way as a graceless thief, but the other escapes punishment generally, by the liberal use of the money he has filched from those who put their trust in him. The ragged and penniless wretch who steals a shilling's worth of food, stands no chance at all of escape; but your well dressed and respectably connected scamp, whose purse is as heavy as his conscience is elastic, has nine chances out of every ten in his favor, and seldom fails, even when closely pressed and warmly hugged, to wire out somewhere, escape conviction and justice, and run his face for such loose sympathy as the world may have at its disposal, for such as are deserving only of condemnation for gross dishonesty.

MERCHANT PRINCES.

The Sunday *Atlas* is introducing into its Portrait Gallery a miscellaneous collection of notabilities. The last number contains a well-engraved head of Joseph McMurray, Esq., with the following sketch of his life:—

"A native of the Emerald Isle, he left the land of his birth to become an adventurer in the western world, and many years ago selected New York as the field of his future enterprise. After successfully battling with the obstacles and difficulties which always beset the path of a young stranger in a crowded mart, he ultimately became connected with a shipping agency and commission establishment, in which he gave proof of an aptitude for business that at once rendered him a favorite with all that he had transactions with. Prompt, faithful, industrious, courteous, and obliging, he rapidly ingratiated himself into the confidence and esteem of all classes of men; and when, at length, he became established in the business he now pursues, favors poured in upon him so plentifully, as to lay a solid and substantial foundation for the exalted position he has since attained.

"Never losing sight of his humble origin, or forgetting the thorny path he had to tread on entering the threshold of mercantile life, he has ever been ready to lend a helping hand to the deserving; and, in his intercourse with the most indigent and obscure, is as affable and kind as with persons of more fortunate condition and elevated rank. Charitable, without being ostentatious; philanthropic, without pretension; scrupulously correct in all his dealings; of irreproachable uprightness and integrity, as a merchant; of warm and generous feelings, as a man; endowed with a fine personal appearance, and a herculean frame; and with the most pleasing and agreeable social qualities, it is not surprising that he should be generally beloved, and an universal favorite wherever he is known. If he were a politician, and desirous of political distinction, we doubt not he could, with much facility, gratify his most ambitious aims; but he is content to remain in the sphere he now occupies—of advantage to himself and usefulness to others. We are glad to add to our gallery the portrait of such a man, and we are certain that our readers will thank us for the selection."

LECTURES ON BRITISH EMIGRATION.

Mr. J. C. Byrne, (author of "Twelve Years' Wanderings in the British Colonies," and many other works on emigration,) recently delivered a course of two lectures on emigration in London. The lecturer, after some general comments upon the magnitude of Great Britain's colonial empire, and the advantageous outlet thereby afforded her for her redundant home population, asserted it as his opinion that no comprehensive national system of colonization could be effectively carried out which did not embrace these two great points, viz: the application of colonial waste lands as premiums to emigrants; and the bestowment of representative institutions upon them to enable them to govern themselves, instead of being subjected to the fatal incubus of centralization.

THE HONEST BOY A SUCCESSFUL MERCHANT.

That "honesty is the best policy," was illustrated, some years since, under the following circumstances. A lad was proceeding to an uncle's, to petition him for aid for a sick sister and her children, when he found a wallet containing fifty dollars. The aid was refused, and the distressed family were pinched for want. The boy revealed the fortune to his mother, but expressed a doubt about using any portion of the money. His mother confirmed the good resolution—the pocket-book was advertised, and the owner found. Being a man of wealth, upon learning the history of the family, he presented the fifty dollars to the sick mother, and took the boy into his service, and he is now one of the most successful merchants. Honesty always brings its reward—to the mind if not to the pocket.

"NATURE AND USES OF MONEY."

We have been favored by the author with a series of Lectures on this subject. They were "delivered before the members of the Edinburgh Philosophical Institution during the months of February and March, 1848, by John Grey, author of the 'Social System, a Treatise on the Principle of Exchange.'" The work covers three hundred and forty-four pages, octavo. The author has distributed twelve hundred copies gratuitously, as follows: To Prince Albert, 1; select members of the House of Peers, 40; members of the House of Commons, 650; London daily papers, 10; London weekly papers, 50; English country papers, 224; Scottish papers, 58; Irish papers, 78; Welsh papers, 10; Channel Island papers, 14; French papers, 12; monthly periodicals, 18; quarterly periodicals, 10; miscellaneous, 25; total, 1200. Mr. Grey, the author, offers "a premium of one hundred guineas to whomsoever may be able to refute its contents." We have not yet found time to examine the work, but shall refer to it in a future number of the Merchants' Magazine. It bears the imprint "Edinburgh: Adam and Charles Black, Booksellers to the Queen. London: Longman, Brown, Green, and Longman."

THE NEW ENGLISH LAW OF BANKRUPTCY.

The new act of Parliament, to empower the Commissioners of the Court of Bankruptcy to order the release of bankrupts from prison in certain cases, which took effect on the 31st ult., has just been printed, 11 and 12 Vict., cap. 86. By this act it is provided, that where any person has been adjudged bankrupt, and has surrendered to the fiat and obtained his protection from arrest pursuant to the practice in bankruptcy, if such person shall be in prison at the time of his obtaining such protection, any commissioner acting under such fiat may order his immediate release, either absolutely or upon such condition as such commissioner shall think fit, which release is not to affect the rights of creditors detaining him in prison. The second clause is a very important one, namely, "*And be it enacted*, that if any bankrupt, whose last examination shall have been adjourned *sine die*, or whose certificate shall have been suspended or refused, shall be in execution or be taken in execution under a *capias ad satisfaciendum*, at the suit of any creditor who might have proved under the fiat, and detained in prison, any commissioner acting under his fiat may order his release after he shall have undergone such term of imprisonment not exceeding two years, as to such commissioner may seem a sufficient punishment for such offence as he may appear to such commissioner to have been guilty of."

DOLLARS AND CENTS, SHILLINGS AND PENCE.

Some of the principal dealers in breadstuffs, says the *Journal of Commerce*, are agreeing with each other to sell only for dollars and cents, and leave shillings and pence to small grocers and market women, who make a part of their profits by retaining the fractions in giving change. It is rather remarkable that such an awkward mode of computation as the old continental, and varying so much in different parts of the country, should have held so long and strong a competition with the uniform and simple method which the federal currency offers. An Englishman bought some flour the other day at five dollars three and sixpence a barrel; and after much labor with paper and pencil, figured out the price at what he thought the very odd sum of five dollars forty-three and three-quarter cents. His correspondents on the other side will think that he drove a close bargain. A day or two ago a New Bedford captain contracted to take some flour there at a shilling a barrel freight. The flour was sent down, and the bills of lading made out, and then arose the mighty question of what a shilling is. In a New York merchant's store it is 12½ cents, but on board a Yankee coaster it is 16⅔.

IMPORTATION OF RUM IN ENGLAND.

Arrivals of rum are now taking place from foreign parts at the port of Dublin, it being comparatively a new branch of import trade at the Irish metropolis, which has taken place since the reduction of duty upon the article. This is no doubt caused in an important degree by the act last passed, altering the duties on foreign and colonial rums and shrubs, by which the amount of duty levied on those articles when imported direct into Ireland is very considerably less than when imported into the other portion of the United Kingdom.

THE BOOK TRADE.

1.—*History of Congress, Biographical and Political: comprising a History of Internal Improvements (Rivers, Harbors, etc.) from the Foundation of the Government to the Present Time; embracing also Historical Notices of various political events—of Ocean Steam Navigation—of the Tea and Coffee Tax; together with Biographies, Personal Histories, etc.* By HENRY G. WHEELER. Illustrated with steel portraits and Fac-Simile Autographs. Vol. II. 8vo., pp. 563. New York: Harper & Brothers.

The second volume of this important work, though not more interesting than that which preceded it, will be found more valuable to the statesman and politician, as it embodies a complete history of internal improvements in the States and Territories of the United States from the earliest to the present time. Besides, recent occurrences, legislative and political, have imparted to the subject a higher degree of importance than has probably ever before attached to it. The public mind is directed towards it with an earnestness which has had no parallel in any former period, thus indicating in the clearest manner the serious and permanent character of the interest it has created. We are not, therefore, surprised that Mr. Wheeler, impressed with the vast importance of the subject, has devoted so large a part of this volume (three-fourths) to its consideration or history. With a perfect familiarity, and free access to all the sources of information, he has succeeded in gathering up the facts and documents, weaving together or grouping them in a clear and connected whole, thus forming a concise but full and comprehensive historical view of the whole subject, including the votes, reports, and indeed the entire action of Congress, as well as the resolutions of the several conventions that have from time to time discussed the subject. The opinions of all our statesmen, from Washington down to James K. Polk, are very properly included. We shall refer to this work again; in the meantime, we heartily commend it to all who desire to become familiar with the subject.

2.—*The Thousand and One Nights; or the Arabian Nights' Entertainments.* 2 vols. 8vo., pp. 586 and 569. New York: Harper & Brothers.

This old favorite of our own and of everybody's childhood and youth, appears not only in the admirable translation of E. W. Lane, but in an elegant typographical dress, embellished with six hundred wood-cuts that "are wood-cuts," by Harvey, and an illuminated title-page. It is, in fine, the most perfect and artistically beautiful edition of the work that has been produced in this country, designed, we presume, by the publishers as a gift book for the approaching Christmas and New Year; and as such we cordially commend it to all who indulge in the luxury of distributing their favors on these interesting occasions.

3.—*Poems: by William Cowper.* With a Biographical and Critical Introduction, by the Rev. THOMAS DALE; and seventy-five illustrations, engraved by JOHN S. and TUDOR HORTON, from drawings by JOHN GILBERT. 2 vols. 8vo., pp. 342 and 344. New York: Harper & Brothers.

Of Cowper it has been well and recently said, that so far from having experienced the slightest abatement, in consequence of the increased number of competitors in the wide field of ethical and didactic verse, his popularity is rather on the increase, for it is founded on the most enduring basis—the union of Christian morals with the most animated poetry. The present edition of his poems is beautifully illustrated with engravings in the best style of the art, and altogether forms the richest and most attractive edition that has yet been produced in the United States.

4.—*History of Mary, Queen of Scots.* By JACOB ABBOTT. With Engravings. 16mo. New York: Harper & Brothers.

The present history of Mary, Queen of Scots, was written for the two among the twenty millions of people in the United States, "between the ages of fifteen and twenty-five, who wish to become acquainted in general with the leading events in the history of the Old World." Few persons have enjoyed a better opportunity than the author of becoming acquainted with the position and the intellectual wants of those whom he addresses.

5.—*Three Sisters and Three Fortunes; or Rose, Blanche, and Violet.* By G. H. LEWES, Esq., author of "Ranthorpe," "A Biographical History of Philosophy," etc. 8vo., pp. 163. New York: Harpers' Library of Select Novels.

This story is not shaped to suit a purpose by falsifying human nature, or coercing it within the sharply defined limits of some small dogma. The great lesson, however, which his intensely interesting story teaches is, that "Will is the central force which gives strength and greatness to character."

6.—*The Architect, a series of Original Designs for Domestic and Ornamental Cottages and Villas, connected with Landscape Gardening, adapted to the United States; illustrated by original drawings of Ground Plots, Plans, Perspective Views, Elevations and Details.* Vol. I. By WILLIAM H. RANLETT. New York: Dewitt & Davenport.

We have, in several former numbers of our journal, taken occasion to notice the parts of this important architectural work as they appeared. Our opinion of its merits have been so frequently expressed, that it would seem almost unnecessary to refer to it in this place. But the completion of a large and beautiful quarto volume, combining the several parts which have been issued at intervals, seems to offer another opportunity to express more decidedly and understandingly our appreciation of the labors of Mr. Ranlett in this elegant and useful department of art. In no work heretofore published have we been able to discover so rare a collection of architectural specimens of buildings, designed for "all sorts and conditions of men," at least all who possess the smallest degree of taste for the Beautiful in things material. There is surely no individual of a correct natural, or a refined and cultivated taste, who could fail to find in Mr. Ranlett's series of designs a rural residence in a palace, villa, or cottage, in accordance with the highest ideal of his refined or most fastidious condition. On the whole, we do not hesitate to commend it to all who contemplate building a residence in any part of our beautiful and picturesque country, as they will not only find in this work complete and appropriate designs, but accurate estimates of the cost of materials, labor, and all "requisite and necessary specifications." The numbers of a second volume are passing through the press, and when completed, will, in connection with the present volume, form the most extensive as well as the most splendid architectural work produced in this country.

7.—*Frank Forrester's Field Sports of the United States, and British Provinces of North America.* By WILLIAM HENRY HERBERT, author of "My Shooting Box," "The Warwick Woodlands," "Marmaduke Wyvil," "Cromwell," "The Brothers," "The Roman Traitor," etc., etc. 2 vols. 8vo., pp. 360 and 367. New York: Stringer & Townsend.

This is doubtless the most elaborate and complete work of the kind that has ever been produced, in this country at least. The author's *reasons* for producing it are not, however, discussed at any great length in his brief and simple preface; these, he says, will be found in the body of the book itself. The best place, perhaps; but once for all, he tells us it appeared to him that such a work was needed at this juncture, and that its publication will tend in some degree to avert the impending doom which seems "to have gone forth from the democracy of the land against game of all sorts." The illustrations for the work were designed by Mr. Herbert from living or stuffed specimens in the cabinet of Mr. Bell, the eminent taxidermist and naturalist. The information relating to the various kinds of sporting, the natural history of game, and the sports peculiar to every region of our wide-spread territory, is full and complete. It seems to us, from the examination we have been able to make, that the work cannot fail of meeting the wants of sportsmen, while it will not be without interest to persons of taste and general intelligence. The publishers have made a liberal outlay in the getting up of the work; the engraving, printing, and indeed the whole mechanical composition of these two volumes is every way creditable to all concerned. We shall endeavor to notice more at length in a future number of our journal, after a more critical examination.

8.—*The Gem of the Season, for* 1849. *With twenty Splendid Engravings.* New York: Leavitt, Trow & Co.

"We are aware," says the editor of this elegant book, "that annuals are often only *settings* for the '*gems* of art,' and the letter-press too often aggregated, merely to become the matrix of these jewels." It seems, however, to have been the aim of all concerned in the "getting up" of this compilation, to redeem it from this "soft impeachment," and to furnish the readers with a literary mirror "that shall reflect all the lustre shed upon it by the garnitures of art." Among the contributors we notice the name of General W. O. Butler, the late democratic candidate for Vice-President of the United States. In his "Lines to a Lady" he has certainly been more successful than in his political aspirations. L. Maria Childs' "She waits in the Spirit Land," we scarcely need say, is worthy of her gifted pen. With the exception of a few military pieces, the contributions are of an elevated tone, and "calculated not only to interest and entertain, but usefully instruct." The twenty engravings which illustrate the volume, though not all equally excellent, possess merit. Many of them are beautiful, and none below mediocrity. The snow white paper, the beautiful printing, and the richly gilded binding, each and all contribute to render it one of the most costly and beautiful gift-books of the season.

9.—*The Sacred Poets of England and America for Three Centuries.* Edited by RUFUS W. GRISWOLD, D. D. Illustrated with Steel Engravings. 8vo., pp. 552. New York: D. Appleton & Co.

This work is based on "Gems of the British Sacred Poets," a work recently published in England by a member of Oxford. It not only combines the materials of that work, but those furnished in the critical and very interesting "Lives of the English Sacred Poets," by Robert Aris Wilmott, of Trinity College, Cambridge, which appeared under the direction of a committee of the "Society for Promoting Christian Knowledge." Mr. Griswold has, however, added pieces from some thirty authors not quoted in either of those works, among whom are Shirley, Baxter, Toplady, Wesley, Williams, Moultrie, and Mrs. Steele; and of our own country, President Dwight, John Quincy Adams, Bishop Doane, Mr. Hillhouse, Wilcox, Croswell, Norton, Whittier, and Coxe. Nearly one hundred poets who have flourished, from Gascoigne, in 1540, down to several of our own living poets, have contributed to the rare collection of sacred gems included in this beautiful volume. Poetry, it has been well said, is the expression of beauty, and every thing truly good is beautiful. No single work in our language is better calculated to elevate the taste and deepen the religious sentiments. The thoughts it breathes, and the feelings it inspires, are as immortal as the souls of the departed poets who gave them birth. The volume is published in the style of the annuals, the best of them; which suggests to our mind the idea, which we presume was present with the publishers, that it is a most suitable gift-book for the season.

10.—*The Republic of the United States of North America; its Duties to Itself, and its Responsible Relations to other Countries; embracing also a Review of the late War between the United States and Mexico, its Causes and Results, and of those Measures of Government which have Characterized the Democracy of the Union.* 12mo., pp. 324. New York: D. Appleton.

The importance of the subjects discussed in the present work will be generally admitted, and although we are not able to perceive the force of all the arguments adduced by the author in support of his views, we are willing to concede to him the merit of ability, and cheerfully commend his work to all who are seeking for information on the topics falling within its scope.

11.—*Poems.* By OLIVER WENDELL HOLMES. New and enlarged edition. 18mo., pp. 272. Boston: William D. Ticknor & Co.

This is the third edition of Dr. Holmes' poems; that is, the first one hundred and fifty pages of the volume contain all that were printed in the edition of 1837, the next thirty-two pages were embraced in that of 1846. The poems added to this new edition cover some eighty pages, including "Urania," "The Pilgrim's Vision," "A Modest Request," and several shorter pieces. The author of a "Fable for Critics" (just published) thus admirably hits our poet:—

> "There's Holmes, who is matchless among you for wit;
> A Leyden-jar always full-charged, from which flit
> The electrical tingles of hit after hit;
> * * * * * * *
> His are just the fine hands, too, to weave you a lyric
> Full of fancy, fun, feeling, or spiced with satiric
> In so kindly a measure that nobody knows
> What to do but e'en join in the laugh, friends and foes."

12.—*Memoir of the Rev. Henry Duncan, D. D., Minister of Rathnell, Founder of the Savings Banks,* author of "Sacred Philosophy of the Seasons," etc. By his Son, the Rev. GEORGE JOHN C. DUNCAN, North Shields. 12mo. New York: Robert Carter.

Biographies of men whose lives have been devoted to the cause of humanity, may not in our time find so many admirers as men who face the cannon's mouth, or distinguish themselves in the army or navy; but they leave behind them memorials of their wisdom and their worth for all coming time. Scattered over the whole of the biography there will be seen such traits of sympathy with human nature, in its joys and sorrows, its hopes and desires, its wants and its tendencies, that wherever the history of Henry Duncan is read, if there exist intelligence and a love of our kind, it cannot fail to awaken an interest. The work conclusively establishes Mr. Duncan's claim as founder of savings banks, although not the first to suggest it as possible for a laborer or mechanic, under the ordinary circumstances of that class in England, to make an important saving out of their weekly earnings. We hope to have leisure to refer to this subject at some future time.

13.—*Pike's Illustrated Descriptive Catalogue of Optical, Mathematical, and Philosophical Instruments, Manufactured, Imported, and Sold by the Author; with the Prices affixed at which they are offered in* 1848, *etc., etc. Designed to aid Professors of Colleges, Teachers, and others, in the selection and use of Illustrative Apparatus in every department of Science.* By BENJAMIN PIKE, Optician. 2 vols. 12mo., pp. 346 and 282. New York: Published and sold by the Author.

Mr. Pike, the author, is well known as an ingenious optician, and manufacturer of mathematical and philosophical instruments. The work before us embraces nearly eight hundred engravings, mostly original designs from the instruments of his extensive establishment, in the various departments of electricity, galvanism, magnetism, electro-magnetism, pneumatics, hydrostatics, mechanics, optics, astronomy, surveying, navigation, meteorology, chemistry, etc. Mr. Pike has received a number of diplomas and silver medals for his air-pumps, galvanic batteries, magnetic machines, barometers, theodolites, magic lanterns, sliders, etc., at various fairs of different institutes, as well as commendatory letters of professors in our most popular colleges and other educational institutions. The information embodied in this work must prove valuable, if not indispensable, to men of science and skill, to the manufacturer and mechanic, and indeed to all who take an interest in the experimental operations of natural philosophy and the progressive advancement of science. It will interest the curious in such matters, while it becomes a *vade mecum* to the man of science.

14.—*Grecian and Roman Mythology.* By M. A. DWIGHT. With an Introductory Notice, by Professor TAYLER LEWIS, and a series of Illustrations in Outline. 8vo., pp. 437. New York: George P. Putnam.

In compiling this work, the author has referred to Heeren, Muller, Moritz, Millin, Wordsworth, Elmes, Anthon, and others, who have treated the subject either directly or indirectly. The information thus gathered and brought together in a symmetrical style forms a most valuable work, and one that is much needed. The mythology of Hesiod, and his genealogical lists, are taken as a chart or guide in the structurial outlines of the work. The principal physical theories that have been worked out by German learning and ingenuity, are presented in a clear and concise manner; and "although many of these are doubtless fanciful and ungrounded, they are nevertheless valuable as illustrating the exuberant suggestiveness of the Hesiodean system." The work is appropriately illustrated with line engravings, and altogether forms a very valuable addition to the classical literature of the ancients. Greek and Latin names of the deities are introduced, for the purpose of rendering the work equally familiar to the scholar.

15.—*The Works of Washington Irving.* New Edition, Revised. Vol. III. *Life and Voyages of Columbus.* 12mo., pp. 437. New York: George P. Putnam.

This, the first volume of Irving's Columbus, is the third of the new and revised edition of his works already published; and, when completed, will form thirteen volumes, more beautiful in all that pertains to the material of book making than any collection of the writings of an American author yet produced in this country. That the intellectual labors of our Irving are worthy of such a liberal outlay on the part of the publisher, we readily admit; but that does not detract from the generous enterprise of Mr. Putnam, the publisher. It, moreover, affords us great pleasure to learn, what we ventured to predict when the plan was first mooted, that the undertaking has thus far been crowned with the most substantial tokens of appreciation, in a sale that will amply reward all concerned in the enterprise.

16.—*The Salamander: a Legend for Christmas. Found amongst the Papers of the late Ernest Helfenstein.* Edited by Mrs. E. OAKES SMITH. 12mo., pp. 149. New York: George P. Putnam.

We honestly believe that the fair lady whose name is prefixed to the title-page with the modest *sobriquet* of editor, and "the late Ernest Helfenstein," are one and the same person. Her description of that individual, at all events, is, if we mistake not, a faithful portrait of herself. The story is full of fancy and of feeling, and furnishes additional evidence of that versatility of talent, we should say of genius, our fair countrywoman possesses in so remarkable a degree. The illustrations by Darley are in his happiest vein; and the volume appears in a style of typographical beauty, not inferior to the best gift books of the season.

17.—*Model Men.* Modelled by HORACE MAYHEW. Sculptured by K. G. HINE. New York: Harper & Brothers.

The pen of the author and the pencil of the artist have contributed to make this one of the most graphic and humorous books of the day. It is brimfull of fun.

18.—*Pioneer History: being an Account of the First Settlement of the Ohio Valley, and the Early Settlement of the North-West Territory. Chiefly from Original Manuscripts, containing the papers of Col. George Morgan; those of Judge Barker; the Discourses of Joseph Buell and John Matthews; the Records of the Ohio Company,* etc., etc. By S. P. HILDRETH. 8vo., pp. 525. Cincinnati: H. W. Derby. New York: A. S. Barnes & Co.

The discussion of the ordinance 1787, relating to the North-West Territory, and the question of the introduction of slavery into the territory belonging to the United States, now free, imparts additional interest to the present volume, although the work itself does not bear directly on either of these questions. This volume furnishes us with a full account of all that took place in Washington county, where the first settlement in the present State of Ohio took place, from 1788 to 1803, or during the existence of the territorial governments. It also exhibits, in a clear and comprehensive form, the leading events in the Ohio Valley before 1788. The work is published under the superintendence of the Historical Society of Cincinnati, and forms the first volume of its transactions. Prepared, as we are informed it was, almost entirely from original papers of unquestionable authority by a gentleman of integrity after a long residence in the country, possessed of attainments and laborious habits of investigation, we are led to the conviction that the work is, in the main, accurate and reliable. On the whole, we consider this work as affording one of the most valuable contributions that have been made of late to the national literature or historical researches of the country.

19.—*Elements of Zoology; or the Natural History of Animals.* From the last Edinburgh Edition. *Chambers' Educational Course.* Revised and Improved, by D. M. REESE, M. D., LL. D. New York: A. S. Barnes & Co.

Adopting, in its leading divisions, the classification of Cuvier, the work "comprises a complete and comprehensive system of Zoology, rudimental as compared with voluminous works, but not less systematic or thorough." This is the first of a series of books of an educational character prepared by Mr. Chambers, whose contributions to useful and entertaining literature have secured for him a high, but well-earned reputation. No publications enjoy a wider popularity, or are more intrinsically valuable.

20.—*Elements of Drawing and Perspective; embracing Exercises for the Slate and Black Board.* By JOHN CLARK. Chambers' Educational Course. Edited by D. M. REESE, M. D., LL. D. New York; A. S. Barnes & Co.

This little work appears to possess all the requisites of a good elementary treatise on the subject.

21.—*Elements of Physiology, in Two Parts.* By Dr. G. HAMILTON. New York: A. S. Barnes & Co.

This school book has been enlarged and improved from Chambers' Educational Course. It treats in a clear, concise, and systematic form, the subjects of animal and vegetable economy, and is well adapted to the capacity of the young student.

22.—*The Waldorf Family, or Grandfather's Legends.* By Mrs. EMMA C. EMBURY. New York: John C. Riker.

Mrs. Embury is not only a popular writer, but a sensible woman; she does not believe in converting "little children into precocious men and women." Hence she believes "that an attractive fairy tale, so thoroughly pervaded by a fine moral truth that the youthful mind cannot but imbibe its influence, is of far more effective benefit than an overstrained moral tale, whose improbable incidents and exaggerated ideas of excellence tend to give false views of life and its duties." She is right; and hence we find, that taking up the fine moral which runs through the legends of Brittany, "and the quaint simplicity of their details," she has, omitting the trappings of superstition, arrayed them in a garb, that, without depriving them of their original Breton costume, rendered them presentable to our American children. The illustrations are pretty, and the whole external appearance of the volume, with its gilded covering, well calculated to gratify the taste of the juvenile reader.

23.—*The Lady's Annual; a Souvenir of Friendship and Remembrance for* 1849. *With original contributions by Female Writers.* Edited by EMILY MARSHALL. Illustrated by twenty-six Engravings. 18mo., pp. 216. New York: D. Appleton & Co.

Though less pretending, in some respects, than several of the gift books of the season, this little volume contains many really excellent articles in prose and verse, nearly all of which were contributed by lady writers of eminence. The engravings are generally pretty, if not all the best specimens of the art.

24.—*A Fable for Critics; or a Glance at a few of our Literary Progenies from the Tub of Diogenes.* By a WONDERFUL QUIZ. Set forth by George P. Putnam, Broadway, New York.

"All the characters sketched in this slight *jeu d'esprit*," says the author, "though it may be they seem, here and there, rather free, and drawn from a Mephistophelian stand point, are *meant* to be faithful." That they are so, all who are acquainted with the genius and character of the "literary progenies" whom our critic poet touches with his masterly hand, will, we think, freely admit. Our friends Bryant, Halleck, Willis, Whittier, Poe, and last, but not least, Harry Franco, (Briggs,) are, in our judgment, as genuine life pictures as were ever sketched with pen or pencil, in prose or verse. The severity, if any, is lost in the general fidelity of the delineations, and the kindly spirit of the poet, whose feelings, we presume, have never been disturbed by the envy or the hostility of rivals.

25.—*Child of the Sea, and other Poems.* By Mrs. S. ANNA LEWIS, author of "Records of the Heart," etc., etc. 12mo., pp. 179. New York: George P. Putnam.

"The Child of the Sea," the longest poem of the collection, covers nearly one hundred pages; "Isabel, or the Broken Heart," the second in the volume; the remaining twenty-five pages are occupied with a few miscellaneous poems. The poems, though not perhaps of the highest order of merit, possess many of the requisites of true poetry; not the least of which is feeling, purity of conception, and a chaste and graceful form of expression. The volume is worthily dedicated to "William Cullen Bryant, with true respect for his genius, and the purity of his public and private character."

26.—*The First of the Knickerbockers, a Tale of* 1673. 12mo., pp. 221. New York: George P. Putnam.

A story of considerable interest, designed to illustrate, with reasonable fidelity, that interesting line of our earliest colonial history to which public attention has of late been particularly directed. The volume is appropriately "inscribed, by permission, to Washington Irving," the well known author of Knickerbocker's History of New York, recently republished in the new and uniform edition of his complete works.

27.—*Lectures to Young Men on the Cultivation of the Mind, the Formation of Character, and the Conduct of Life.* By GEORGE W. BURNAP. 12mo., pp. 350. Baltimore: John Murphy.

The first edition of this work made its appearance in 1840, and a second edition in the following year. The present edition, the third, contains six additional lectures. The subjects embraced in the series are, the cultivation of the mind; the means and method of intellectual culture; character defined; faults of character; the relations of the sexes; intemperance; importance of early habits; duties of an American citizen; social influence of trade; American society; the benefits of machinery, and the destiny of the English language. The character and tendency of the lectures is eminently practical, and their circulation among the young men of our country will, we believe, be attended with the best results.

28.—*Shandy McGuire, or Tricks upon Travellers; being a story of the North of Ireland.* By PAUL PEPPERGRASS, Esq. 12mo., pp. 354. New York: Edward Dunigan & Brother.

The national character of this story will at once be inferred from its title, and, like everything almost in Irish literature, it abounds with specimens of rich and rare wit and humor. Those who do not sympathize with the theology of the author, must appreciate his faithful delineations of character, and his graphic pictures of travel. It affords us pleasure to notice the neat and beautiful style in which this, and indeed all the works emanating from the Brother Dunigan's press make their appearance.

29.—*The American Almanac and Repository of Useful Knowledge for the year* 1849. 12mo., pp. 370. Boston: Charles C. Little & James Brown.

This work has reached its twentieth annual volume, with profit, we trust, to editors and publishers, as no work of the kind is more deserving of support, or has been more serviceable to the public. The present volume appears to be considerably enlarged, and contains a multitude of "facts and figures," that must be useful as matter of reference to all "orders and conditions of men." It is as reliable in its statements as could be expected, and has long since become a standard authority in all matters embraced within its broad and comprehensive design. It appears to be the best issue of a uniformly excellent and valuable work.

30.—*Poems by William Wordsworth; with an Introductory Essay on his Life and Writings.* 12mo., pp. 356. New York: C. S. Francis & Co.

A collection of Wordsworth's poems in a form accessible to the general reader in this country has long seemed desirable, and we have no doubt but that the present selection will be acceptable to the public and profitable to the publishers. It contains the author's most characteristic and beautiful pieces, and we feel quite sure that the poet's admirers will be glad to recognize their favorites in a form so convenient, and at the same time so elegant in all that pertains to its *material* production. Its value is somewhat enhanced by the pertinent and appreciating essay of H. T. Tuckerman, Esq., on the life and writings of the poet.

31.—*Mrs. Hofland's Tales.* New York: Charles S. Francis.

We have here three handsome volumes, each covering nearly two hundred pages, and each embracing one of her most pleasing and instructive tales, viz: "The Officer's Widow and her Young Family;" "The Merchant's Widow and her Family;" and "The Clergyman's Widow and her Family." Few writers have enjoyed, and deservedly, a wider popularity in this department of literature. Her books may be put into the hands of our sons and daughters without the fear of any vitiating influence from their perusal, and parents may read them with pleasure and advantage.

32.—*Hans Andersen's Story Book.* With a Memoir, by MARY HOWITT. New York: C. S. Francis.

Hans Christian Andersen, the author of these stories, is unquestionably "one of the most remarkable men of his day." "Like most men of great original talent, he is emphatically one of the people; and writing, as he has done, principally of popular life, he describes what he himself has suffered and seen." Those who have read the "True Story of his Own Life," for a translation of which we are indebted to Mrs. Howitt, will need no other recommendation for the present volume. It is filled with stories for little children, emanating from an intellect and a heart as pure as were ever embodied in human form. Indeed, we should in vain look for a collection of stories so simple in construction, and yet so ingeniously fraught with all that can charm and instruct the minds of children.

33.—*Wreaths of Friendship.* By T. S. ARTHUR and F. C. WOODWORTH. 12mo., pp. 240. New York: Baker & Scribner.

A more appropriate "gift book for the young at the approaching Christmas and New Year" has not, to our knowledge, been published this season. But its handsome covering, gilded pages, and tasty embellishments by no means constitute its principal value, which will be found in its varied, agreeable, and instructive contents; in its pleasing and well-told tale, anecdote, or fable; its graphic sketch and its easy and flowing verse, harmoniously blending intellectual delights with the teachings of a pure and hearty morality.

34—*The Life, Letters, and Remains of the Rev. Robert Pollok, A. M.*, author of "The Course of Time," and "Tales of the Covenanters." By JAMES SCOTT, D. D., Pastor of the First Reformed Dutch Church, Newark, N. J. 18mo., pp. 364. New York: Robert Carter.

The author of this memoir spent some time in Scotland in the society of an intimate friend of Robert Pollok, a gentleman who had watched over the poet's progress with something akin to parental solicitude, and who knew well his struggles, successes, and history. Availing himself of this *almost* personal acquaintance with Pollok, and a life of him by his brother, the Rev. David Pollok, he has succeeded in preparing an apparently truthful memoir of his life, enriched with many of his private letters, and a number of his lighter poetical productions. Dr. Scott seems to have formed a correct estimate of the character and genius of his subject, and we think his labors will be properly appreciated by a large class of the more serious readers.

35.—*Sermons by Henry Edward Manning, M. A., Archdeacon of Chichester.* 8vo., pp. 303. New York: Stanford & Swords.

This volume contains twenty sermons, prepared, we presume, by the author in the ordinary course of his ministerial labors. The sermons are, for the most part, practical, referring to the spirit of Christianity, and inculcating the graces and virtues of a Christian life, rather than the dogmas or doctrines of any of the different sects of Christendom. The author is considered one of the ablest sermonizers in the established Church of England, and belongs, we believe, to that branch of it designated as high church. The preacher dedicates this collection of discourses "to all who, in an age of controversy, are walking in the path wherein 'the wayfarers, though fools, shall not err.'"

36.—*The West; a Metrical Epistle.* By FRANCIS LIEBER. New York: G. P. Putnam.

This is one of the *thinnest* bound books we have ever met with. It contains fifteen leaves, or thirty pages, with gilded edges; embracing "The West," a metrical epistle, which covers fifteen of its pages, and the remainder of the volume is occupied with a poem, "The Ship Canal," in eighteen four line stanzas, a "Festive Song" of twelve, and the "Son's Departure from New York," of twelve more; closing with a sonnet on "The Ship Jamestown." As an evidence of our appreciation of Dr. Lieber's poetical works, we have transferred "The Ship Canal" to the "Mercantile Miscellanies" of the present number of this Magazine.

37.—*Euthanasy; or Happy Talk towards the End of Life.* By WILLIAM MOUNTFORD, author of "Martyria," "Christianity the Deliverance of the Soul and its Life," etc. 18mo., pp. 466. Boston: William Crosby & H. P. Nichols.

The author of this work is an Englishman, but of a spirit quite different from that which prompted a British reviewer to ask, "Who reads an American book?" A British author of deep spiritual insight finds in this country a class of intelligent and cultivated persons of the purest literary taste and justest moral discernment, and therefore causes his work to be published in America, rather than in his own country. The favor extended to "Martyria" by some of the best minds here, is a presage of the cordial welcome that will be given to the present volume. It is replete with noble sentiments, and inculcates a pure and elevated spirit of devotion, in perfect harmony with the teachings of Christianity.

38.—*Hartmann's Theory of Acute Diseases, and Homœopathic Treatment.* Third German Edition. Revised and considerably enlarged by the Author. Translated, with additions, and adapted to the use of the American Profession, by CHARLES J. HEMPEL, M. D. Vol. II. New York: William Radde.

We noticed the first volume of this work, which was published last year. The present volume relates to two classes of inflammatory diseases, viz: Fevers characterized by inflammatory eruptions having a definite shape, and fevers with definite inflammatory affections, etc. The causes, character, and treatment of these diseases are treated with great minuteness and remarkable clearness. Indeed, the work seems designed for private as well as professional practice.

39.—*Classical Series.* Edited by Drs. SCHMITZ and ZUMPT. *P. Virgilii Marinis Carmina.* Philadelphia: Lea & Blanchard.

This is the second volume of a classical series of school-books on a uniform plan, designed to constitute, within a definite number, a complete Latin Curriculum. The testimonials in favor of this series from eminent teachers, as well as the high reputation of the learned editors, Drs. Schmitz and Zumpt, will be considered by all as a sufficient guaranty of its value as aids to the classical student.

40.—*Adventures of a Medical Student.* By ROBERT DOUGLAS, Surgeon Royal Navy. With a Memoir of the Life of the Author. New York: Burgess, Stringer, & Co.

The production of a talented young man, whose career was brought to a sudden and premature close. It is a production of great originality of conception, power of delineation, and possesses a deep and absorbing interest.

THE AMERICAN STATESMAN.—This is the title of a new weekly paper, which will be commenced in a few days. It will be edited by Abijah Ingraham and William J. Tenney, and published in the city of New York. The plan of the *Statesman* is an admirable one, and in some of its essential features it will differ from any other journal published in this country. In its editorial department it will discuss fearlessly every great question of reform, political or social, that agitates the public mind, or engages the attention of the thoughtful in all countries. Having an acquaintance with the gentlemen who are to control its columns, we have no hesitation in saying that it will be no ordinary publication, but will supply, in newspaper literature, a *desideratum* which now exists; and from the varied and useful character of its contents, and the ability with which it will be conducted, it will force itself into a large circulation.

CHILDREN'S ILLUSTRATED BOOKS.—J. C. RIKER has recently published a fine collection of books for children, among which are "Sayings and Doings; or, the Proverbs and Practice," by JANE STRICKLAND; "Pebbles from Jordan; or, Bible Examples of Every Day Truth," by Miss GRAHAM; and a "New Hieroglyphical Bible; with Devotional Pieces for Youth." The two first named are illustrated with beautiful colored engravings, and the Bible contains four hundred cuts, all by Adams, one of the best wood engravers in the United States. They are among the prettiest and best books of the season for children of all ages, from five to fifteen.